

DESFIL



Development Strategies
for Fragile Lands
USAID/G/EG/EID

THE GREEN BOOK

VOLUME 2
METHODOLOGIES

1994

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RENARM



Regional Environmental and Natural
Resources Management Project
USAID/G-CAP

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Preface

The Green Book has evolved from a series of activities supported by the Policy Initiatives component of USAID/G-CAP's Regional Environmental and Natural Resources Management (RENARM) Project. Through buy-ins with the Agricultural Policy Analysis Project, Phase II (APAP II), natural resource policy inventories were performed by Abt Associates Inc. in Guatemala, Belize, Honduras, El Salvador, and Costa Rica from 1989 through 1990. The Green Book was subsequently developed to combine lessons from the five countries and to present information in such a way that it could be used by Missions and local decision makers to improve their understanding of the natural resource and environmental consequences of a broad array of policies.

The 1992 version of The Green Book was initially produced for RENARM as a loose-leaf notebook entitled *The Green Book: An Environmental Sourcebook*. That work was supported by RENARM buy-ins to Abt Associates Inc. through APAP II with additional support from the Development Strategies for Fragile Lands (DESFIL II) Project. This initial version was subsequently published as *The Green Book, Part 1: A Policy Taxonomy and Analysis of Policies Affecting Natural Resources and the Environment*, October 1992, APAP II: Methods and Guidelines No. 406 and *The Green Book, Part 2: Manual For Conducting A Natural Resource Policy Inventory*, September 1993, APAP II: Methods and Guidelines, No.406, Volume 2.

The Green Book 1994 builds and expands upon the 1992 edition. It is supported by a buy-in from RENARM to Abt Associates Inc. through DESFIL II. The objectives of the Green Book throughout its development have been to: (1) promote participation in natural resource policy formulation; (2) increase the quality and use of information and analysis; and (3) build institutional capacity for policy formulation and dialogue.

The Green Book has received strong support from two individuals whose ideas and energy have contributed significantly to its structure and evolution. Bill Sugrue, recently ADO for USAID/G-CAP and the RENARM Project Officer, has been an enthusiastic supporter of the vision. Ronald Curtis, former ADO for ROCAP, contributed significantly to the Green Book, especially to the articulation and development of the sections that analyze the trade-offs between growth, welfare, and conservation.

Three people made production of this version of the Green Book possible. Jack Hopper edited and provided the graphics. Scott Lacy processed the words and the chaos. Marsha Strother managed the tables and the printing process.

Users' Guide to the Green Book

THE GREEN BOOK

VOLUME 1: POLICY SOURCE BOOK

- POLICY SYNTHESIS
- PROBLEM-POLICY MATRIX
- POLICY ANALYSES

THE GREEN BOOK

VOLUME 2: METHODOLOGIES

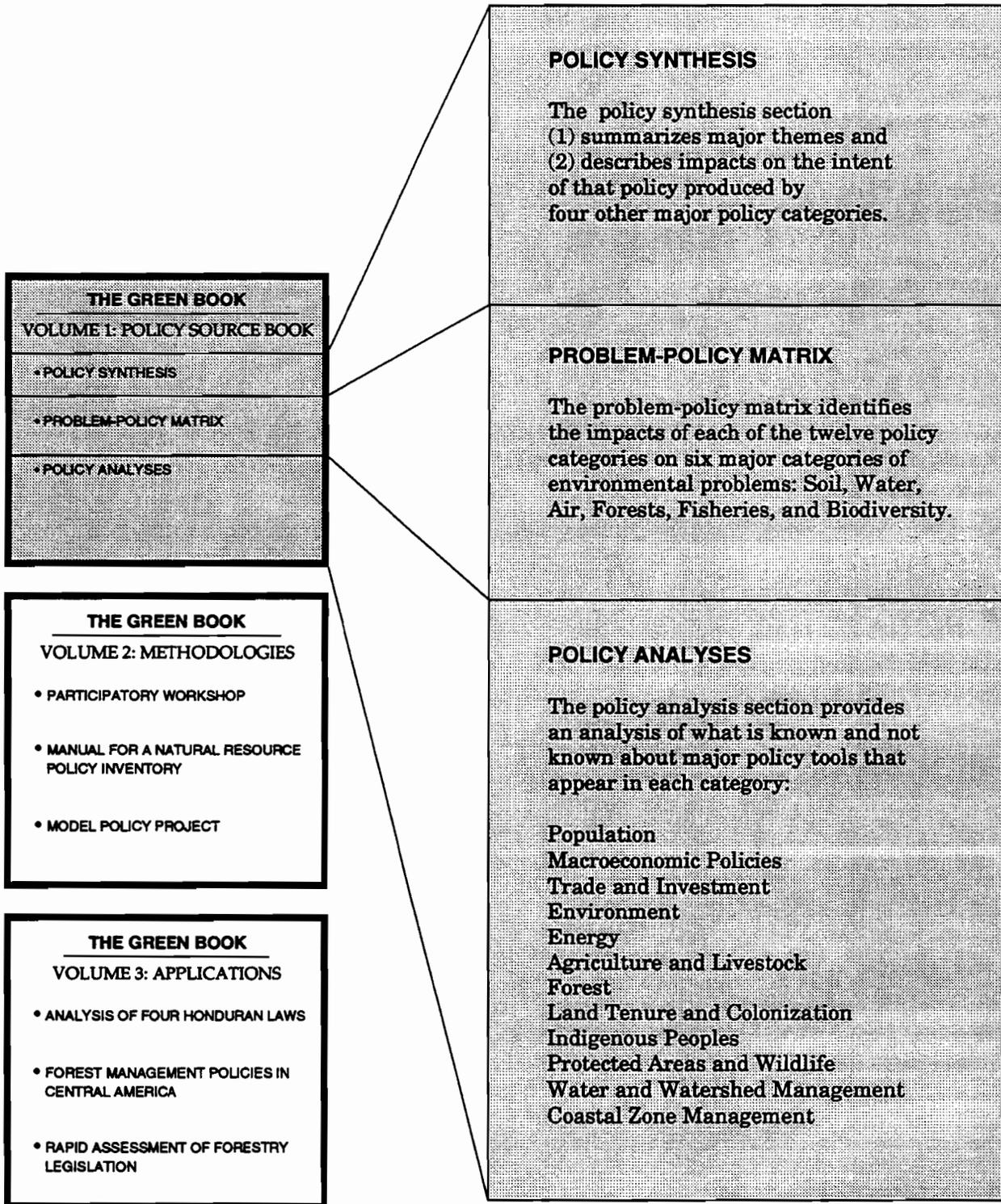
- PARTICIPATORY WORKSHOP
- MANUAL FOR A NATURAL RESOURCE
POLICY INVENTORY
- MODEL POLICY PROJECT

THE GREEN BOOK

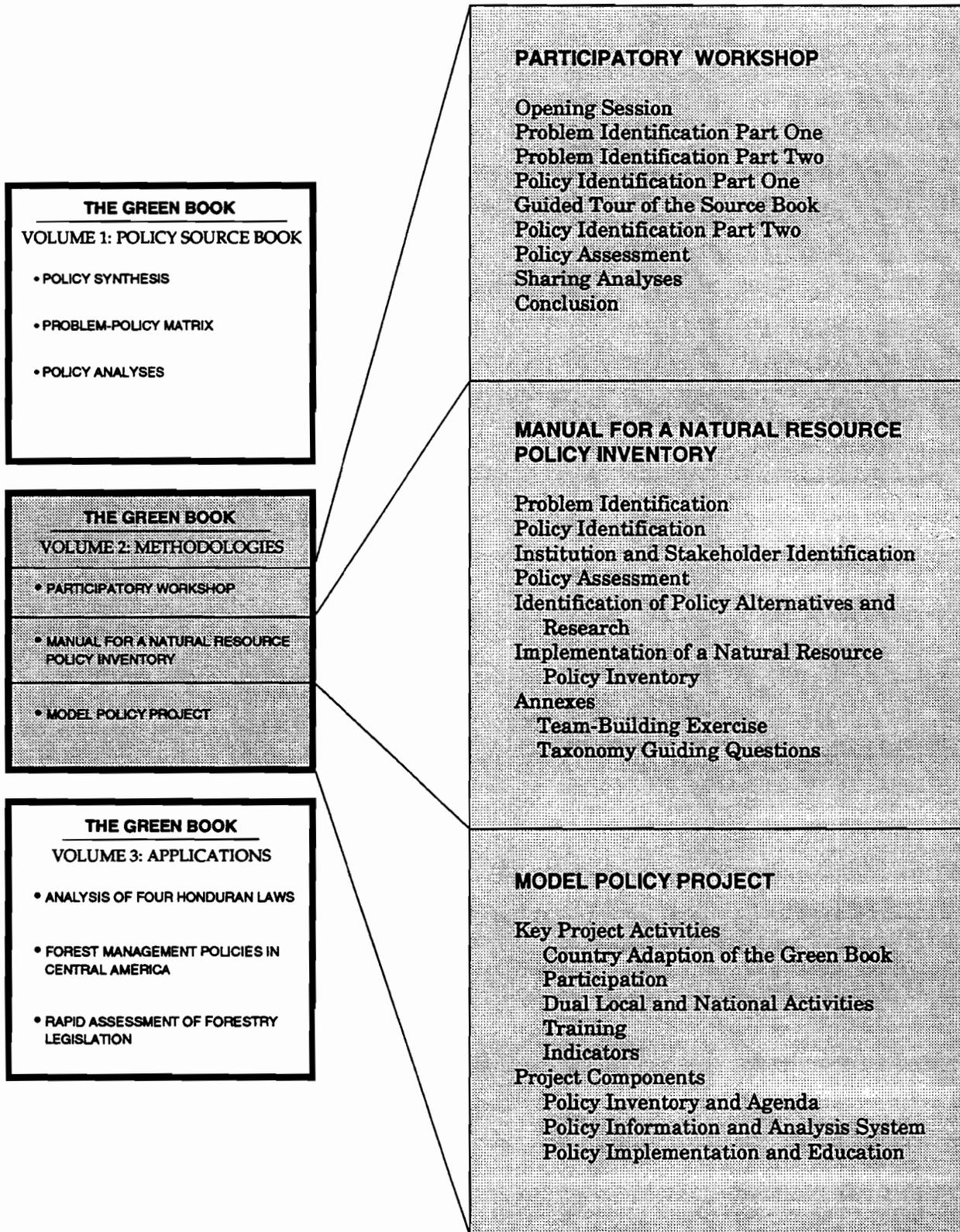
VOLUME 3: APPLICATIONS

- ANALYSIS OF FOUR HONDURAN LAWS
- FOREST MANAGEMENT POLICIES IN
CENTRAL AMERICA
- RAPID ASSESSMENT OF FORESTRY
LEGISLATION

Green Book Volume 1: Policy Source Book



Green Book Volume 2: Methodologies



Green Book Volume 3: Applications

THE GREEN BOOK
VOLUME 1: POLICY SOURCE BOOK

- POLICY SYNTHESIS
- PROBLEM-POLICY MATRIX
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VOLUME 3: APPLICATIONS

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- RAPID ASSESSMENT OF FORESTRY LEGISLATION

ANALYSIS OF FOUR HONDURAN LAWS

Agricultural Modernization Law
Forestry Incentives Law
Environmental Law
Municipalities Law

FOREST MANAGEMENT POLICIES IN CENTRAL AMERICA

Belize
Costa Rica
El Salvador
Guatemala
Honduras
Nicaragua

RAPID ASSESSMENT OF FORESTRY LEGISLATION

Guatemala Emergency Forestry Regulations
Nicaragua Emergency Forestry Regulations
El Salvador Proposed Forestry Law

Introduction

The Green Book, Volume 2: Methodologies provides three potential uses for the Policy Source Book: a workshop, a policy inventory, and a model policy project.

The Green Book workshop is a tool designed for a wide array of potential users including nongovernmental organizations, policy advisory and analysis units, and other national and local groups interested in natural resource and environmental problems.

This two-day workshop uses the Policy Source Book to develop analytic techniques to help participants: (1) understand how policy combinations may or may not promote their interests, (2) identify the questions that need to be asked and answered to make this determination, (3) understand the benefits and costs (trade-offs) associated with policy alternatives, (4) identify other groups that may or may not share similar concerns and problems, (5) identify the points of convergence and divergence as preparation for conflict resolution, and (6) design programmatic activities that best fit the policy environment and an organization's mission and resources.

The Green Book policy inventory has five steps: (1) problem identification, (2) policy identification, (3) institution and stakeholder identification, (4) policy assessment, and (5) identification of policy alternatives and research priorities. The inventory describes the uses of the Policy Source Book in each step of the inventory. In addition, this section provides a brief inventory team-building exercise as well as questions keyed to the Policy Source Book taxonomy and analysis.

The model policy project has three primary components: (1) policy inventory and agenda, (2) policy information and analysis system, and (3) policy implementation and education activities. Key project activities involve: (1) country adaption of the Green Book, (2) participation by stakeholders, (3) dual local and national activities, (4) training, and (5) use of indicators.

These methodologies can be nested together. The workshop is an element of inventory which in turn is an element of the model project.

Policy Taxonomy

POPULATION

Policies to Slow Population Growth

- Population Growth Issues
- Beliefs and Assumptions
- Fertility Regulation
- The Demographic Transition Model

Redistributing Population

- Internal Redistribution
- External Redistribution

Gender Discrimination

- Reducing Gender Bias in Policies and Programs

MACROECONOMIC POLICIES

Natural Capital and the Economy

- Nature as Capital
- Natural Resource and Environmental Accounting

Economic Evaluation of Environmental Resources

Monetary and Credit Policies

- Monetary Policies
- Credit Policies

Exchange Rate Policies

- Overvalued Exchange Rate
- Floating Exchange Rates

Fiscal Management

- Fiscal Deficits
- Taxes and Revenue Sources
- Debt Financing
- Debt-for-Nature Swaps

Structural Adjustment Lending

TRADE AND INVESTMENT

Export Promotion

- Tariff Policies
- Trade-Generated Economic Growth
- Export Promotion Policies
- Trade Liberalization

Privatization

- Privatization of State-Owned Enterprises (SOEs)
- Re-regulation
- Privatization of Natural Resources

Foreign Direct Investment

- Special Incentives
- Foreign Exploitation of Natural Resources
- Technology Transfer and Human Capital Development
- Pollution Havens

ENVIRONMENT

Protection of Environmental Quality

Water Quality

- Direct Regulation
- Effluent Charges
- Subsidies and Tax Exemptions

Air Quality

- Direct Regulation
- Emission Charges and Environmental Taxes/Tax Differentials
- Other Economic Instruments

Land Disposal

- Direct Regulation
- Economic Instruments

ENERGY

Fossil Fuels

Policies Affecting the Demand for Fossil Fuels

Policies Promoting End Use Efficiency

Policies Affecting the Supply of Fossil Fuels

Hydroelectric Energy

Policies Affecting the Demand for Hydroelectric Energy

Policies Promoting End Use Efficiency

Policies Affecting the Supply of Hydroelectric Power

Alternative Fuels

Policies Affecting the Demand for Alternative Fuel Sources

Policies Affecting the Supply of Alternative Energy Sources

AGRICULTURE AND LIVESTOCK

Product Price Controls

Price Ceilings

Price Floors and Support Prices

Price Bands

Input Subsidies and Prices

Credit Subsidies

Pesticide Subsidies

Fertilizer Subsidies

Subsidies for Agricultural Machinery

Direct Government Activities

Input Marketing

Product Marketing

Regulation of Pesticides

Direct Regulation

Indirect Regulation

Cross-Border Effects

Livestock Policies

- Credit Policies
- Fiscal Incentives
- Tenure Policies
- Provision of Public Services

FOREST

Concessions and Licenses for the Use of Public Timber

- Duration of Timber Concessions
- Conditions and Restrictions on Timber Concessions
- Award Process for Timber Concessions
- Concession Size

Forest Revenue Systems

- Charges On Concessions
- Charges Based on Standing Timber Volumes
- Charges on Timber Harvested
- Charges on Forest Products Production
- Charges on Minor Forest Products
- Charges on Foreign Trade
- Charges For Services
- Charges On Productive Factors
- Charges On Companies
- Government Participation in Concessions, Harvesting, and Processing

Forest Industry and Export Policies

- Domestic Industry/Resource Protection Policies
- Direct Government Involvement in Forest-Related Industries
- Price Controls
- Forest Industry Structure
- Certification and Eco-labeling

Private and Community Forest Management

- Private Forest Management and Tree Tenure
- Farm and Community Forest Management
- Nontimber Forest Products

Fuelwood and Other Biomass

- Policies Affecting the Demand for Fuelwood
- Policies Affecting the Supply of Fuelwood

Reforestation Policies

- Fiscal Incentives and Policies
- Public Reforestation Projects

LAND TENURE AND COLONIZATION

Land Tenure and Markets

- Property Rights
- Ownership Distribution
- Land Markets
- Land Banks

Colonization and Reform

- Direct Government Policies
- Indirect Government Policies
- Spontaneous Settlements and Invasions

Land Use Capability and Planning

INDIGENOUS PEOPLES

Indigenous Land Rights

- Values, Assumptions, and Policy Guidelines

Resource Management

- Exclusion from Parks and Protected Areas
- National Parks and Indian Parks
- Conditional Occupancy and Use
- Priority Use
- Lease-Back Provisions

Compensation for Conservation
Biosphere Reserves
Management and Research
Forest Parks and Refuges Catering to Tourism
Recreational Development
Protection of Boundaries
Economic Development Projects

International Legal Instruments

UN Charter
Prevention and Punishment of the Crime of Genocide
Implementation
Organization of American States Charter
Implementation
Other Sources of Policy

Changing Values and Moral Persuasion

UN Working Group on Indigenous Populations
International Conference of NGOs, Indigenous Peoples, and the Land
Inter-American Indian Congress

PROTECTED AREAS AND WILDLIFE

Types and Legal Basis of Protected and Reserved Areas

Types of Protected Areas
Problem Resolution for Protected Areas
Land Use Policy and Issues

Resource Management and the Local Community

Community Participation
Direct Cash Incentives and Disincentives
In-Kind Incentives and Disincentives
Fiscal Incentives and Disincentives

Financing

- International NGOs
- Foundations, Trust Funds, and Endowment Funds
- Public Law 480 Funds
- Foreign Aid
- Joint Government-NGO Financing
- Debt-For-Nature Swaps
- Bilateral Debt-For-Nature Swaps

International Conventions and Support

Nature Tourism

Wildlife Protection and Trade

- International Conventions
- Export Controls and Cross-Border Issues
- Hunting Laws

WATER AND WATERSHED MANAGEMENT

Water Control, Use, and Pricing

- Policies Affecting Water Use
- Policies Affecting Water Quality

Watershed Management

- Policies Applied at the Watershed Level
- Institutional Policies

Irrigation Provision and Pricing Policies

COASTAL ZONE MANAGEMENT

Policies Affecting the Quality of Coastal Resources

- Subsidies
- Investment Incentives
- Fiscal Instruments
- Regulations
- Voluntary Approaches
- Integrated Coastal Zone Management Plans

2

Policies Affecting the Use of Coastal Resources

Ownership

Regulations

Management

Policies Affecting the Management of Fisheries

Subsidies

Regulations

Taxes

Use Rights

Public Participation

Green Book Workshop

Opening Session

Problem Identification, Part 1

Problem Identification, Part 2

Policy Identification, Part 1

Guided Tour of the Source Book

Policy Identification, Part 2

Policy Assessment, Part 1

Policy Assessment, Part 2

Application of Analysis

Conclusion

Green Book Workshop

This workshop provides an introduction to the use of the Green Book, Volume 1: Policy Source Book. It can be used as a free-standing workshop or as part of the Model Policy Project described in Volume 2.

The Source Book provides a policy taxonomy, a general analysis, and a systematic methodology for disaggregating the impacts of policies across sectors. It was designed to support the efforts of NGOs, PVOs, government agencies, and donors that wish to promote a more participatory, transparent, and information-driven policy formulation process.

This two-day workshop is organized around five activities: problem identification; policy identification; institution and stakeholder assessment; analysis of policy alternatives; and application of analysis. It uses the Source Book to develop analytic techniques to help participants:

- Understand how policy combinations may or may not promote their interests.
- Identify the questions that need to be asked and answered to make this determination.
- Understand the benefits and costs (trade-offs) associated with policy alternatives.
- Identify other groups that may or may not share similar concerns and problems.
- Identify the points of convergence and divergence as preparation for conflict resolution.
- Design programmatic activities that best fit the policy environment and an organization's mission and resources.

The Green Book is a process. It presents new ways of thinking about policy to aid in the systematic identification of policy sets that affect specific interests and concerns. The Green Book does not provide answers. It provides a process for creating your own temporary answers and for revising them as circumstances change. It is designed to help in creating a policy process that is:

transparent; provides representation for all participants; and responds to new information, new values, and new participants.

Many of the concepts and exercises presented in this workshop were developed collaboratively with Sylvia Marín and draw heavily on PACA workshops prepared under the RENARM project. We are grateful to Ray Victurine and Ken Lee for their contribution to the initial design and especially to Sylvia Marín for her creative contribution, skilled revision of the substantive and procedural content, and for her gentle insistence on addressing the field-based needs of the users.

This workshop is a preliminary starting point for what we hope will be an evolving process and product that unfolds to reflect the rich experience of the participants. The evolution, improvement, and refinement of many of the ideas and tools presented here depend upon contributions from workshop participants, so please share with workshop facilitators and the Green Book authors your comments, suggestions, and ideas for ways to make the Green Book more useful.

Green Book Workshop

Identifying and Disaggregating Policy Impacts

SESSION 0: Opening Session

0.1 Introduction

This workshop is part of the Green Book package and is designed to be used by NGOs, PVOs, government ministries, and by anyone whose interests are affected by policy.

0.2 Objectives of Session

- Review objectives for the workshop
- Provide overview of flow and agenda of workshop
- Introduce facilitators and participants
- Identify and clarify participants' expectations

0.3 Workshop Objectives

Visual 0.3.1: Workshop Objectives

This workshop presents the techniques for using the Green Book Source Book to:

- Identify the set of policies that have an impact on a problem.
- Dissaggregate the impacts of the individual policy tools.
- Systematically explore the interactions among policy tools.
- Identify the opportunities and limitations that are created by an existing policy or by a proposed change in policy.
- Identify who is likely to benefit or lose from the opportunities and/or limitations created by a policy set.
- Better understand your own situation and that of other stakeholders in order to form strategic alliances.
- Make better policy choices that take into account the interdependencies among the environment, economy, and social welfare.

0.4
Key Questions

- What are the general benefits of policy analysis?
- How can analysis be used as the basis for strategic planning?

0.5
Overview

Why Is It Useful to Understand Policy? Policies establish a set of incentives that structure the way people behave. They create opportunities for some people and impose limitations on others. When one group benefits from taking advantage of those opportunities, another group's welfare may be reduced. This phenomenon occurs across different geographical areas, between nations and ethnic groups, between gender, and between generations.

Visual 0.5.1 provides examples of policy-created opportunities and limitations that span generations, national boundaries, geographical areas, and gender.

Visual 0.5.1: Policy Impacts

Across geographical areas

Policy: Output prices held below world market levels to subsidize urban consumers while input prices (credit, fertilizer, water) are held low.

Behavior: (a) Farmers intensify production and expand their operations to vulnerable soils, causing erosion and downstream water contamination; (b) farmers overuse chemical inputs and cause downstream pollution.

Policy: Subsidies for cattle.

Behavior: Cattle producers convert forests to pasture.

Between nations

Policy: Pesticide residue standards for imported produce.

Behavior: Depending on market size, pesticide management and residue testing capabilities improve in the exporting country.

Between ethnic groups

Policy: Privatization of communal land.

Behavior: Landless colonialists displace indigenous groups by invading communal lands and converting them to small private holdings.

Between gender

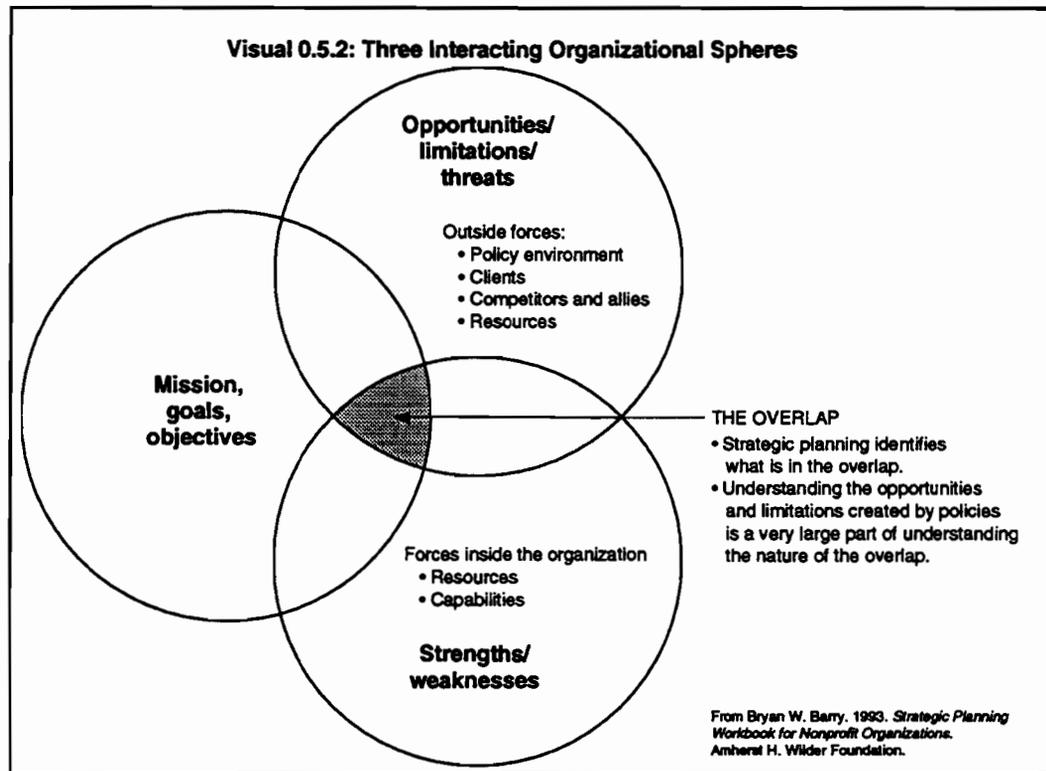
Policy: Loans and technical assistance provided only to titled landowners.

Behavior: When women traditionally do not have title to property their concerns are not considered in development programs.

Between generations

Policy: Restriction on chlorofluorocarbon emissions.

Behavior: Welfare of future generations implicitly considered in present investment decisions.



Policies exert their influence on behavior interactively and cumulatively. Each policy has stakeholders (winners and losers) associated with it. These stakeholder groups have different types of influence in the policy arena, and consequently play a significant role in the environment of an NGO or government ministry.

Visual 0.5.2 illustrates the three major areas that an organization must consider as it designs and implements activities. Good strategic planning depends on a realistic understanding of the overlap among:

1. The organization's mission and goals.
2. The opportunities, limitations, and threats imposed by outside forces.
3. The strengths and weaknesses of the organization.

Policies and their constituencies make up a major part of the outside forces that structure the area of overlap. Without the ability to disaggregate the impacts of policies and identify the stakeholders associated with each policy impact, a large part of the information needed for good strategic planning is not available.

This includes information for creating strategic alliances, identifying client groups, designing activities to take advantage of opportunities or mitigate limitations, participating in policy change, and education.

Almost anything an organization might want to accomplish depends on its understanding the policy environment.

Visual 0.5.3: Benefits of Analysis

Being able to disaggregate the impact of policies and identify their stakeholders will allow an organization to:

- Understand how policy combinations may or may not promote its interests and support its values.
- Identify important questions to ask and answer to make this determination.
- Understand the benefits and costs [trade-offs] associated with various alternatives.
- Identify other groups that may or may not share similar concerns and problems, and build strategic constituencies.
- Identify the points of convergence, divergence, and conflict as preparation for conflict resolution.
- Precisely identify clients and effectively design specific programmatic activities.

0.6
Introductions

Participants and facilitators introduce themselves and tell the group a little bit about their work and professional responsibilities.

0.7
Workshop
Outline

This workshop is organized around the five steps in a policy analysis:

Visual 0.7.1: Five Steps of Policy Analysis

- **Problem identification.** What are biophysical symptoms of the problem concerning a group or organization?
- **Policy identification.** What policies motivate the behavior that causes these problems?
- **Institution and stakeholder assessment.** Who experiences the problem and who provides the solutions and implements policies?
- **Policy analysis.** What is the role played by policies?
- **Application of analysis.** Identification of important questions and recommendations for future action.

Visual 0.7.2: Workshop Agenda

DAY ONE

08:00-09:00	SESSION 0 - Opening Session
09:00-10:30	SESSION 1 - Problem Identification Part One
10:30-11:00	COFFEE
11:00-12:00	SESSION 2 - Problem Identification Part Two
12:00-13:30	LUNCH
13:30-15:00	SESSION 3 - Policy Identification Part One
15:00-15:30	COFFEE
15:30-17:00	SESSION 4 - Guided Tour of the Source Book

DAY TWO

08:00-10:00	SESSION 5 - Policy Identification Part Two
10:00-10:30	COFFEE
10:30-12:00	SESSION 6 - Policy Assessment Part One
12:00-13:00	LUNCH
13:00-15:00	SESSION 7 - Policy Assessment Part Two
15:00-15:30	COFFEE
15:30-17:00	SESSION 8 - Application of Analysis
17:00-17:30	SESSION 9 - Conclusion

0.8
Identification of
Expectations

(EXERCISE)

Facilitator Notes: This exercise identifies the participants' expectations for the workshop and clarifies any misconceptions.

1. Provide a small pad of notepaper to each participant to use during the workshop. Each participant writes down the two or three most important skills or capabilities (one per page) that they would like to learn from the workshop. At the end of the workshop (1) these expectations will be reviewed and the workshop assessed to see if expectations were met, and (2) participants will be invited to refine workshop exercises to make them more useful.

2. Collect the written notes and sort them onto the wall into like groups of skills or capabilities. (Record the information for use in Session 9.)

3. Review them with the group and clarify expectations, then review the "Caution" using Visual 0.8.

4. Review Key Concepts using Visual 0.9.

Caution—Limitations of the Green Book. The Green Book is a process—a point of view—that will help you systematically identify policy sets that affect your interests and concerns. The exercises in this workshop for using the Green Book are meant to provide some new ways of thinking about policy. How you focus the analysis and apply the results will be determined by your organization's mission and resources.

There are *no perfect policies* because today's solutions are tomorrow's problems. However, a policy process that can respond to new information, is transparent, and provides representation for all stakeholders will have the best chance of producing policies that lead to sustainable use of the natural resource base. This package is designed to help you contribute to developing and maintaining such a process. It does not provide answers; it provides a process for creating your own temporary answers and for revising them as circumstances change.

Visual 0.8.1: CAUTION—Limitations of the Green Book

- The Green Book is a process.
- It presents new ways of thinking about policy that will help you systematically identify policy sets that affect your interests and concerns.
- There are no perfect policies.
- The Green Book does not provide answers.
- The Green Book provides a process for creating your own temporary answers and for revising them as circumstances change.

**0.9
Key Concepts**

Visual 0.9.1: Key Concepts

- Effective strategic planning must take into account the policy context of an organization's activities.
- There are *no perfect policies* because today's solutions are tomorrow's problems.
- The Green Book is designed to help you contribute to creating a policy process that is:
 - Transparent
 - Provides representation for all participants
 - Responds to new information, new values, and new participants
- The Green Book does not provide answers; it provides a process for creating your own temporary answers and revising them as circumstances change.

SESSION 1: Problem Identification Part One

1.1 Objectives

- Develop a working definition of a “policy.”
- Recognize linkages between problems, behavior, and policy.
- Become aware of the powerful role played by implicit policies.

1.2 Key Questions

- What is a policy?
- What is the relationship among problems, behavior, and policy?
- When is a problem a problem?

1.3 Session Agenda

- The problem/behavior/policy cycle.
- When is a problem a problem?
- Explicit and implicit policies.

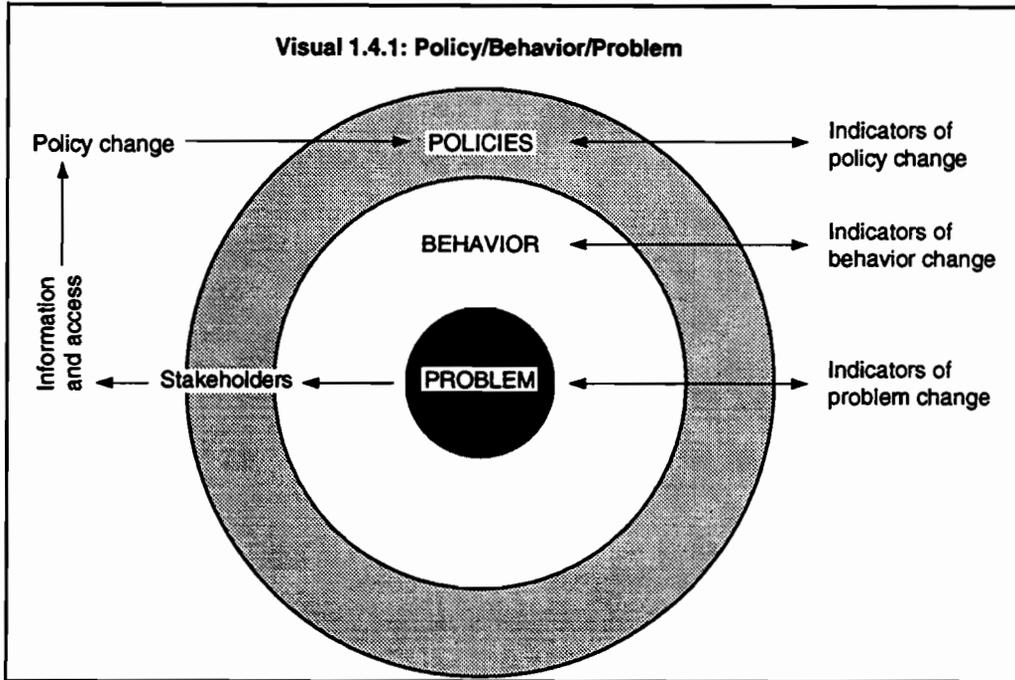
1.4 The Policy/ Behavior/ Problem Cycle

(EXERCISE) *Facilitator Notes: Review the following information and distribute 20 sets of policy / behavior / problem cards (total 60 cards). Help the group sort them into a matrix like the one shown in Visual 1.4.2.*

This is a simple model to help sort observations. In reality, however, it is a continuous cycle:

- Policies establish incentives that influence behavior.
- If a behavior creates a problem for someone with influence in the policy arena then policy change takes place.
- This starts a new cycle of policy/behavior/problem.

The policy/behavior/problem cycle is a continuous cycle, which can be entered in several places (Visual 1.4.1).



Visual 1.4.2: Relationship among policy, behavior, & environmental problems

POLICY	BEHAVIOR	PROBLEM
Subsidies on pesticides	People overuse pesticides	Pesticide contamination of streams
Absence of land tenure	People invade protected areas	Deforestation and loss of biodiversity
Corruption in the Forestry Department expected	People do not comply with management plans	Degradation of forest stands and deforestation
Forests stand in the way of development	Decision makers do not consider forests in their development plans	Conversion of forests to other uses

Note: In many cases, classification is open to debate, and there may be several possible combinations for each policy/behavior /problem row.

1.5
When Is a Problem
a Problem?

(DISCUSSION)

Facilitator Notes: 1. For each problem in the policy / behavior / problem matrix, help the group discuss the following questions:

- *What are the biophysical symptoms?*
- *Why is it a problem?*
- *For whom is it a problem?*
- *Do they have access to the policy arena?*
- *If not who are their representatives or advocates?*

2. Review the ideas in Visual 1.5.1 and emphasize that the Green Book is designed to help organizations bring new information into the problem definition process and to encourage new participants in the formulation of policy.

Visual 1.5.1: When is a problem a problem?

All decision making about policy arises because someone believes there is a problem. They want to improve their situation or someone else's situation.

What is defined as a problem is determined by:

- values
- available information about impact
- which groups have access to the decision process

New problems are identified and defined when:

- values change
- new information becomes available
- new participants gain access to the policy-making arena

EXAMPLES

Changing values: Slavery, conquest of indigenous peoples, rights of women and children, and rights of other species to exist have come be considered problems because social values have changed.

New information: The concentration of chlorofluorocarbons in the atmosphere was not considered a problem until data accumulated documenting the thinning of the ozone layer.

New participants: Women's issues were excluded from the policy process until women began to participate in government and in the market.

Environmental issues were excluded from the policy process until environmental NGOs began to represent stakeholders who were interested in the environment.

1.6 What Is a Policy?

(PRESENTATION) *Facilitator Notes: Present the following information with the aid of Visual 1.6.1.*

Policies can be explicit and implicit. Explicit policies are usually easy to identify, although the distinction among laws, regulations, and technical standards is vague. Examples are a toxicity tax on pesticides, a subsidy on fertilizers or equipment, a land tax, or a log export ban.

Implicit policies take many forms, are much more difficult to identify, and are often very powerful forces in determining resource use behavior. They also create incentives that modify behavior and have winners and losers associated with them.

Visual 1.6.1: Illustrative List of Implicit Policies

- The absence of an explicit policy to regulate disposal of chemical waste into a river is an implicit policy to permit it. That implicit policy creates a distribution of opportunities and limitations. The benefits are experienced by some people and the costs are experienced by others.
- An institutional structure that makes it difficult to implement a protected areas law is an implicit policy not to protect the area. This implicit policy benefits some and not others.
- Restricted access to policymaking is an implicit policy to exclude the preferences of some groups.
- A practice that allows officials to augment their salary by collecting bribes is an implicit policy to withhold some state revenue from the normal budgeting process and redistribute it to public sector employees. It is an informal tax. Depending on the context it may also be an implicit policy not to implement an explicit policy.
- Values provide criteria for making choices and as such are a powerful source of implicit policy. For example, a value about natural resources that see forests as unlimited or an impediment to development creates implicit policies to convert them to other uses.

(EXERCISE)

Facilitator Notes: Help large group verbally sort the policies from the exercise in section 1.4 into explicit and implicit policies, as illustrated in Visual 1.6.2.

A policy is almost anything that we can modify that systematically changes the way people use natural resources.

Visual 1.6.2: Explicit and Implicit Policies

Explicit Policies: <ul style="list-style-type: none">• Laws• Regulations• Technical standards	Implicit Policies: <ul style="list-style-type: none">• Absence of a policy• Practice or institutional characteristic• Value
Examples include: Provision of subsidies for pesticides Pesticide residue specification Environmental impact assessment required for use of resources in protected area Declaration of a protected area Specific requirements for management plans Tax on idle land Minimum diameter for harvest Transport license for logs	Examples include: Corruption in government generally accepted Absence of land tenure Absence of land use capability classification system Forests stand in the way of development Invasion of idle lands allowed Poor people need and deserve land Natural resources are plentiful and unlimited Inadequate personnel to evaluate EIAs in the Ministry of Natural Resources

1.7
Key
Concepts

Facilitator Notes: Review the Key Concepts covered in Session 1 with aid of Visual 1.7.1.

Visual 1.7.1: Key Concepts

- Policies exert their influence on behavior, not on the natural resources themselves.
- The impact of behavior on the natural resources creates the problem.
- Problems are recognized as problems and motivate policy change only when those who experience the problem have access to information and to the policy arena.
- Implicit policies often exert more influence on behavior than do explicit policies.
- Policies in another sector or policies established in another country may exert more influence on behavior than policies established to manage the targeted resource.

SESSION 2: Problem Identification Part Two

2.1 Objectives

- Identify priority problems for the participants.
- Identify the problem focus for the rest of the workshop.
- Discuss the cause and effect relationship of key problems.

2.2 Key Questions

- What are the most important problems?
- What problems should the workshop address?

2.3 Session Agenda

- Rapid problem identification.

2.4 Preliminary Problem Identification

(DISCUSSION)

Facilitator Notes: Using the policy/behavior/problem matrix from Exercise 1.6, help the group identify which of these problems are of concern and then expand the table until all the group's problems and concerns are on the matrix. During the discussion identify:

- *The biophysical symptoms of the problem.*
- *The behavior that causes the problem.*

2.5
Voting on the
Top 10 Problems

(EXERCISE)

Facilitator Notes:

- 1. Distribute 5 colored stickers to each participant and ask them to allocate them in any fashion among the problems listed in the problem column.*
- 2. During the Coffee Break tally the results and rank the problems in order of significance from 1 to 10, as illustrated below.*

1	Ranked problems
2	...
3	...
4	...
5	...
6	...
7	...
8	...
9	...
10	...

SESSION 3: Policy Identification Part One

3.1 Objectives

- Identify the policies related to the most important problems.
- Describe the policy formulation and change process.
- Develop an individual baseline of your policy analysis knowledge.

3.2 Key Questions

- What are the policies related to those problems?
- What is currently required to change these policies?
- What would a good policy process look like?

3.3 Session Agenda

- Individual baseline assessment
- Exploration of the policy process

3.4 Individual Baseline Assessment

- (EXERCISE) *Facilitator Notes:*
1. *Present the results of the group ranking of the top 10 (or fewer) problems.*
 2. *Distribute the form in Visual 3.4.1 and ask participants to fill it out individually from the point of view of their organization.*
 - *For the top 10 problems, what policies do you think are the most important? List them in order of importance.*
 - *Is your organization doing anything to address these problems? If so, what?*
 - *What needs to happen to solve the problem?*
 - *Who should do it? Where? When?*
 3. *Collect the baseline assessments and save them for review during Session 9..*

Visual 3.4.1: Individual Baseline Assessment

	For the top 10 problems, what policies do you think are the most important?	Is your organization doing anything to address these problems? If so, what?	What needs to happen to solve the problem?	Who should do it? Where? When?
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

3.5
Brief Exploration of
the Policy Process

(DISCUSSION)

Facilitator Notes: **Step 1.** *In a group discussion, choose the three policies that participants believe are the most relevant to the top 10 problems. In a large matrix like that shown in Visual 3.5.1 (on following page), answer the following questions:*

- *What problem is it trying to solve?*
- *Who defined the problem?*
- *Who defined the solution (developed the policy)?*
- *Where would ideas for a better policy direction come from?*
- *Who can change the policy?*
- *Where would decisions be made?*
- *Who would participate in these decisions?*
- *Which groups would have to support change?*

Step 2. *From looking at the table, help the group answer the following questions and summarize their answers on flip charts, as shown below:*

- *Are there any common trends?*
- *Has this process produced “good policies”? Why not? What is missing?*
- *In a perfect world, what would a good process look like?*

Characteristics of present policy process	Ideas for a better process

Step 3. *Save the summary flip charts to use in Session 8.*

Visual 3.5.1: Exploration of the Policy Process

	Policy 1	Policy 2	Policy 3
What problem is it trying to solve?			
Who defined the problem?			
Who defined the solution (i.e., developed the policy)?			
Where would ideas for a better policy direction come from?			
Who can change the policy?			
Where would decisions be made?			
Who would participate in these decisions?			
Which groups would have to support the change?			

SESSION 4: Guided Tour of the Source Book

4.1

Objectives

- Learn how to access the source book using either the problem/policy matrix or policy taxonomy.
- Become familiar with the information contained in the source book.

4.2

Introduction

(PRESENTATION) *Facilitator Notes: Present the following material.*

The problems identified in Session 1 share six important characteristics, which are summarized in Visual 4.2.1.

Visual 4.2.1: Characteristics of an Environmental Problem

- Explicit and implicit policies across many sectors exert their influence on behavior interactively.
- These policies can modify behavior in very indirect and nonintuitive ways.
- We do not know exactly how policies change the day-to-day behavior at the local level.
- Usually the benefits are concentrated and the winners know who they are and are well organized.
- Generally the costs are broadly dispersed and the losers may not know who they are and are not well organized.
- Many of the stakeholders do not have representation in the policy process.

These characteristics make it difficult to know if a particular policy or a policy change will affect behavior in a way that supports your goals, reflects your values, or addresses your problems. The Source Book was designed to provide a systematic way to examine the entire range of policies that may be relevant to your concerns and to help you identify who wins, who loses, by how much, and over what time frame.

Volume 1, Policy Source Book, is divided into three sections: policy synthesis, problem-policy matrix, and policy analysis of twelve sectors (See Visual 4.2.3). The Source Book provides a taxonomy of policy tools. The taxonomy is a catalogue of the tools policymakers have used to modify resource use behavior, accompanied by a brief description of what is known and not known about their impact. This catalogue groups policy tools by sector.

Volume 2, Methodologies, contains a participatory workshop, a manual for natural resource policy inventory, and a model policy project (See Visual 4.2.4).

Volume 3, Applications, contains three applications: an analysis of four Honduran laws, forest management policies in Central America, and rapid assessment of forestry legislation. (See Visual 4.2.5).

Visual 4.2.6 contains explanations of the various chapter elements and illustrates how they appear in the text.

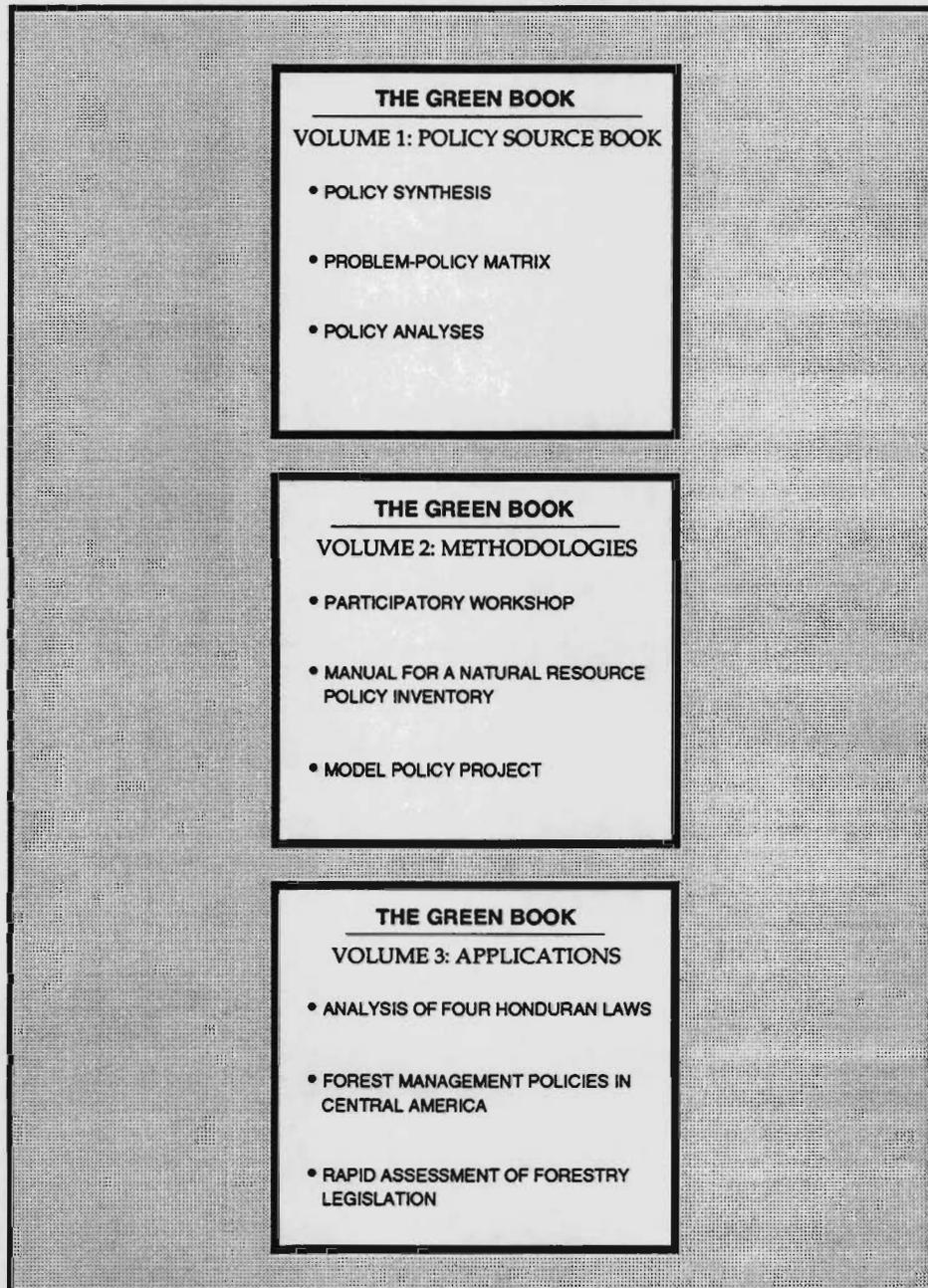
The taxonomy and general analysis is provisional and evolving. The policy tools and our understanding of impact will change as we learn more about the interaction between policy and its impact at the local, national, regional, and global levels.

As you become more familiar with the policy conditions in your country, you will be able to contribute significantly to this knowledge through:

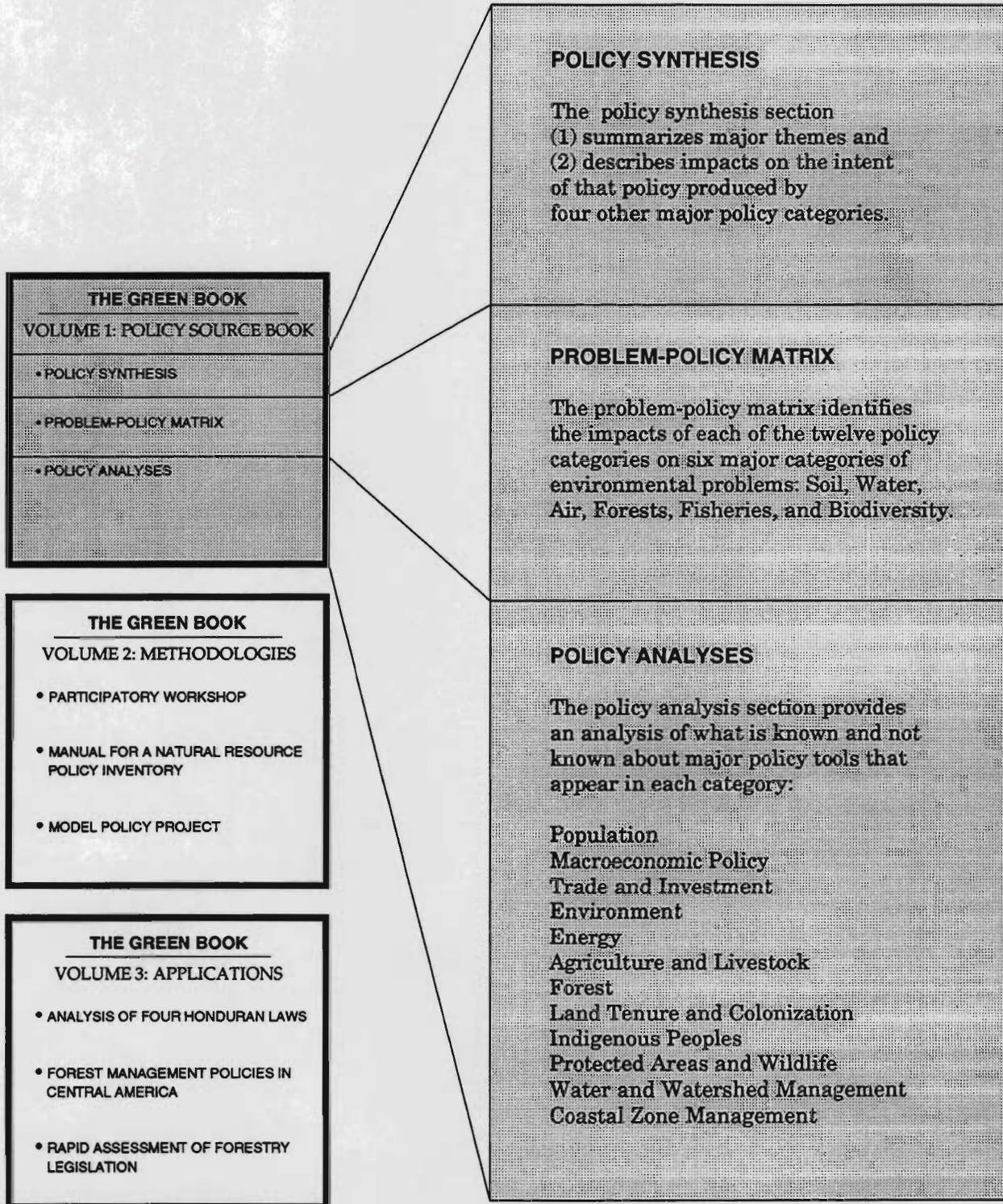
- Maintaining an updated policy inventory organized around your concerns. The inventory can focus on a single area or project or on an entire country.
- Tracking the impact of those policies on a set of indicators.
- Focusing your activities efficiently and communicating effectively in national and regional policymaking arenas.

The Source Book is one volume of the three-volume Green Book. Together, these three volumes provide a map that will help your organization navigate through the policy terrain. They provide a systematic way to organize information and think about relationships among policies. The system is designed to be modified and adapted to your particular needs and interests.

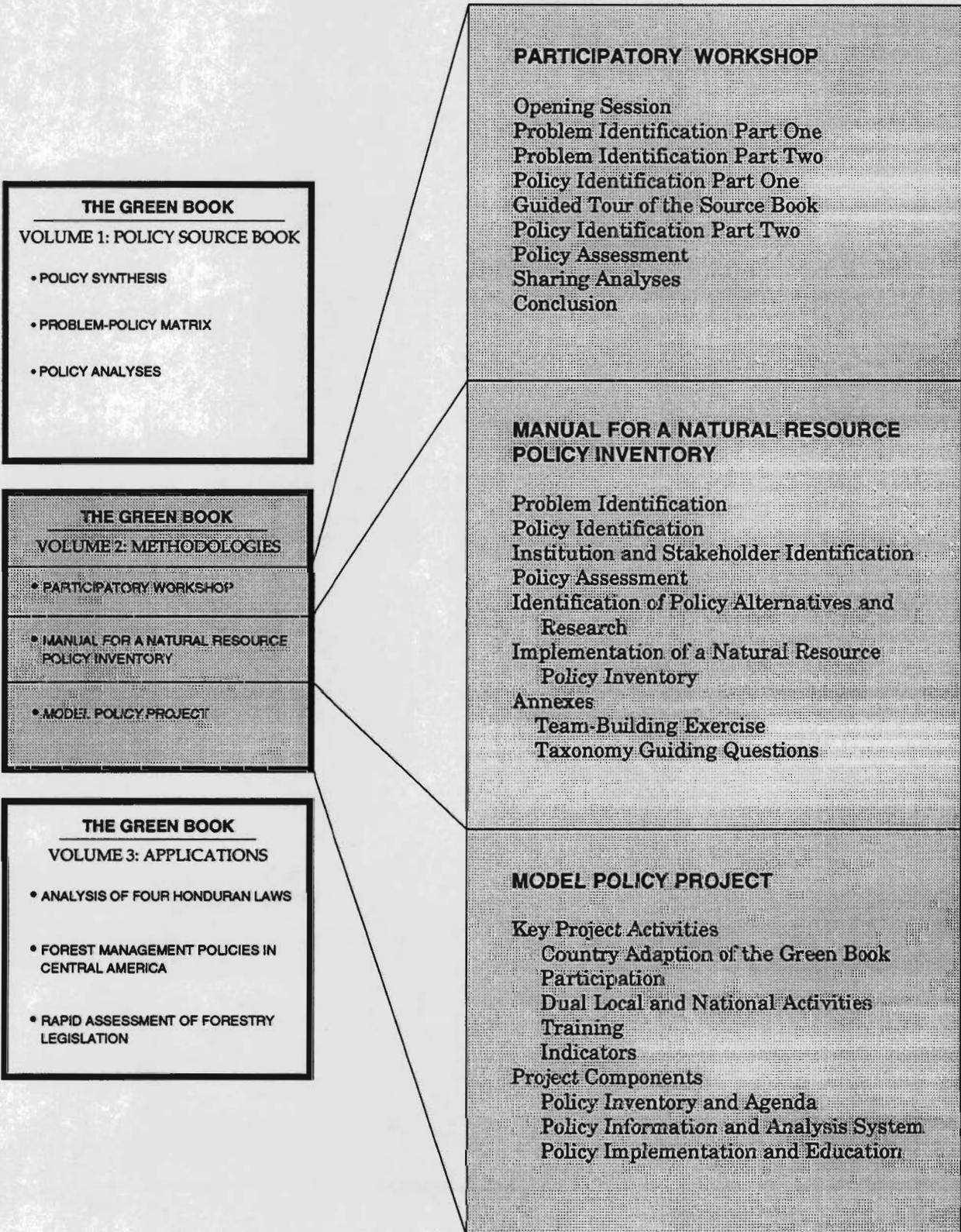
Visual 4.2.2: Green Book



Visual 4.2.3: Green Book Volume 1: Policy Source Book



Visual 4.2.4: Green Book Volume 2: Methodologies



Visual 4.2.5: Green Book Volume 3: Applications

THE GREEN BOOK
VOLUME 1: POLICY SOURCE BOOK

- POLICY SYNTHESIS
- PROBLEM-POLICY MATRIX
- POLICY ANALYSES

THE GREEN BOOK
VOLUME 2: METHODOLOGIES

- PARTICIPATORY WORKSHOP
- MANUAL FOR A NATURAL RESOURCE POLICY INVENTORY
- MODEL POLICY PROJECT

THE GREEN BOOK
VOLUME 3: APPLICATIONS

- ANALYSIS OF FOUR HONDURAN LAWS
- FOREST MANAGEMENT POLICIES IN CENTRAL AMERICA
- RAPID ASSESSMENT OF FORESTRY LEGISLATION

ANALYSIS OF FOUR HONDURAN LAWS

Agricultural Modernization Law
Forestry Incentives Law
Environmental Law
Municipalities Law

FOREST MANAGEMENT POLICIES IN CENTRAL AMERICA

Belize
Costa Rica
El Salvador
Guatemala
Honduras
Nicaragua

RAPID ASSESSMENT OF FORESTRY LEGISLATION

Guatemala Emergency Forestry Regulations
Nicaragua Emergency Forestry Regulations
El Salvador Proposed Forestry Law

Policy Taxonomy Category

POLICY SUBCATEGORY

KEY POINTS

- ▶ Bulleted list of important points.
- ▶ A quick reference to the content of the section.

The text describes what is known and not known about the impact of a policy on resource use. It is a summary of theory and reality and is written in nontechnical language. Stakeholder and policy implementation issues are also addressed

Likely Impacts of a Policy or Policy Change

- ▶ **GROWTH**
Short-term and long-term impacts on economic growth.
- ▶ **WELFARE**
Short-term and long-term impacts on human welfare.
- ▶ **CONSERVATION**
Short-term and long-term impacts on ability of the ecosystem to provide environmental services.

Mini-Case

Brief case studies used to illustrate specific policy situations or specific solutions to existing problems.

Indicators: Relevant Policy Subcategory

Problem Indicators: Lists potential physical and behavioral measures of problems.

Policy/Process Indicators: Lists potential policy and institutional measures that address problems.

RESEARCH QUESTIONS

These questions specify some of the gaps in the existing knowledge base.

REFERENCES

Readers who desire more information should consult these sources.

4.3 Revisiting the Caution

The Green Book provides *new ways of thinking about policy*. How you focus the analysis and apply the results will be determined by your organization's mission and resources.

The Green Book does not provide answers; it provides a process for creating your own temporary answers and for revising them as circumstances change.

4.4 Policy-Centered Analysis

In this case, you know the existing policy and want to understand to what extent it may be contributing to or causing a problem. You have become aware of a proposed change in policy and want to understand its possible implications and interactions with other policies. Examples of this kind of analysis are presented in the Green Book—Volume 3: Applications. This methodology is summarized in Visual 4.4.1.

In this context, you develop the analysis of impacts, identify what other groups may share your concerns, develop your position on the desirable direction of change, and then design your strategy. That may include sponsoring policy dialogue, coordinating donors around a desirable outcome, educating stakeholders or the general public, designing a project or field activity, providing technical assistance, and so on.

Visual 4.4.1: A Policy-Centered Analysis

Policy Synthesis	Taxonomy and general analysis	Country inventories						
		Belize	Guatemala	Honduras	Nicaragua	Costa Rica	Panama	El Salvador
Population								
Macroeconomic Policy								
Trade and Investment								
Environment								
Energy								
etc.								

You know the policy and are interested in its impact:

What opportunities and limitations are created?

Who is made better off? Who is made worse off? How?

- Read Policy Synthesis and identify general policy relationships.
- Read the corresponding section in the Policy Taxonomy and Analysis.
- Review your country inventory if you have one. If not perform a mini-inventory.
- Perform a rapid analysis based on the Source Book
- Use the Inventory Manual to perform a complete inventory if needed.

**4.5
Problem-Centered
Analysis**

In this case you know the problem and want to know which policies may have an impact on the behavior causing the problem. This will be the approach we use in the workshop. The steps in this approach are outlined in Visual 4.5.1.

Visual 4.5.1: A Problem-Centered Analysis

	Environmental Problems					
	Soil	Water	Air	Forest	Fishery	Biodiversity
Population						
Macroeconomic Policy						
Trade and Investment						
Environment						
Energy						
etc.						

You have a problem and want to know which policies may have an impact on the behavior causing the problem:

- Identify the environmental manifestations of the problem.
- Turn to the Problem-Policy Matrix. Read the policy sections that correspond to the problem and select the policies that have an impact.
- Select the policies that seem relevant to your situation and review those sections in the Policy Taxonomy and Analysis.
 - Read the Key Points and Likely Impacts tables first.
 - Do these policies exist in your situation?
 - Read the Policy Synthesis to identify any other important relationships that may seem important.

Note: You can design your own problem-policy matrix so that it is precisely tailored to a specific area project site or a specific set of issues.

4.6 Review of Source Book

Spend a few minutes reviewing the Problem-Policy Matrix and becoming familiar with the contents of the Source Book.

4.7 Group Assignments

Facilitator Notes: Assign the top 3 problems—1 problem to each group of 6 participants—and ask the group to select a recorder and reporter.

4.8 Review of Sessions 1–4

During Sessions 1-4, you have:

- Identified the most important problems and policies related to them.
- Described the policy formulation and change process.
- Developed an individual baseline of your policy analysis knowledge.
- Selected the problem focus for the remainder of the workshop.
- Toured the Source Book.

4.9 Preview of Session 5

- Use the Problem-Policy Matrix to identify the policies that pertain to the 3 most important problems identified in previous sessions.
- Construct a rapid policy inventory.
- Begin analysis of policy impacts and interactions.

SESSION 5: Policy Identification Part Two

5.1 Objectives

- Become familiar with identifying the policy set most likely to have an influence on a problem.
- Begin to identify indicators to track changes in policy, changes in behavior, and changes in the physical manifestation of a problem.

5.2 Key Questions

- What are the most important policies that are relevant to the problem?
- What are their probable impacts on behavior causing the problem?

5.3 Session Agenda

- Identify policies that are relevant to the problem.
- Create a rapid policy inventory.

5.4 Rapid Policy Inventory

(EXERCISE) *Facilitator Notes:* Review group assignment and hand out the rapid inventory form (Visual 5.4.1). Explain the instructions and have the small groups of participants do a rapid problem-based policy inventory.

Instructions:

Step 1. Turn to the Problem-Policy Matrix in the Source Book. This matrix lists 6 categories of environmental problems and the policies (identified in the Source Book) that create incentives for the behavior that contributes to the problem. The index for the Problem-Policy Matrix appears in Visual 5.4.2.

Step 2. Select the policy areas that you think are relevant to the problem and turn to the section in the Source Book where they are discussed.

Step 3. Read the **Key Points** and **Likely Impacts** and review **Indicators** for each policy.

Step 4. Read the Policy Synthesis section to identify other important relationships.

Step 5. Mini-inventory. Make a list of all the major policy tools that are relevant to your problem and fill in the table in Visual 5.4.1.

Step 6. Present the inventory to the large group. Focus on the impact of each policy on the problem and expand detail with the aid of contributions from other groups.

Visual 5.4.1: Rapid Policy Inventory Organized around a Problem

Policy	Does your country have such a policy? Describe it.	If you do not know how, could you find out? Review the inventory manual for suggestions.	What has been the policy's impact, if any?

SESSION 6: Policy Assessment Part One

6.1 Objectives

- Disaggregate policy impacts.
- Make judgments about which policies are most likely to be of interest to you and your organization.
- Identify those who stand to gain or lose from these policies.
- Identify policy interactions.
- Share results of small group analyses.

6.2 Key Questions

- Which policies are most important for your problem?
- How do they affect the behavior that causes the problem?
- What indicators might be useful?

6.3 Session Agenda

- Scale
- Assess policy impact
- Identify stakeholders
- Paired policy comparison
- Policy ranking

6.4

Introduction:

Scale Is Important

(PRESENTATION) *Facilitator Notes: Present the information below in 6.4 and in Visual 6.4.1.*

Policies distribute access to natural resources. Much of the new conventional wisdom is to replace command-and-control policies with policies that promote market mechanisms. A system that allocates resources primarily through market mechanisms favors the preferences of those with access to markets or with access to resources that are exchanged in a market.

While this system is better than many other ways to allocate resources—for example, on the basis of conquest, race, family origin, religion, sex, or through a centralized governmental regulatory mechanism—it does have two serious pitfalls that policymakers must address.

1. When the market allocates natural resources it tends to be biased against the preferences of those who do not participate in the market economy. These groups include the elderly, children, women, the poor, indigenous groups, and future generations.

A system of resource distribution that is biased against the preferences of old people tends to undervalue wisdom, patience, the longer-term perspective, and transmission of culture. One biased against children tends to undervalue future productivity, hope, and unanticipated invention; a bias against women undervalues the preferences of half the population and the importance of preparing children for life. A bias against poor people overvalues the preferences of those who do have generous resource endowments; in the absence of policy corrections this contributes to further endowment concentration. A bias against indigenous groups ignores the views and preferences of those who manage resources communally and are opposed to participation in the market and contributes to the destruction of cultural diversity. And a bias against future generations discounts uncertainty and the value and distribution of future benefits and costs.

2. The market does not record the real value of many natural resources, and it does not record the services provided by natural resources (e.g., waste processing, carbon sequestration, climate stabilization, genetic resiliency based on biodiversity, soil generation, and nutrient cycling).

This second problem has become an increasingly severe concern as the human economy grows in scope and scale and accounts for a larger and larger proportion of the resource flow in the earth's biosystem.

Visual 6.4.1: Pitfalls of a System that Allocates Natural Resources through Market Mechanisms

Allocating natural resources through market mechanisms is preferable to allocating them through other systems; however, there are two serious pitfalls that policymakers must address:

1. Allocation through market mechanisms tends to favor the preferences of those who have access to markets or have resources that are exchanged in markets. Such mechanisms tend to be biased against the preferences of groups who do not participate in the economy. These groups and their values include:

Old people: wisdom, patience, long-term perspective, transmission of culture.

Children: future productivity, hope, unanticipated invention.

Women: importance of preparing children for life and sustainability of subsistence resources.

Poor people: undervalues the preferences of those who do not have generous resource endowments.

Indigenous groups: undervalues the preferences of those who manage resources communally and/or are opposed to participation in the market.

Future generations: uncertainty and the value of distribution of future costs and benefits.

2. Markets tend not to record the real value of many natural resources and the environmental services they provide.

6.5
Policy Assessment and
Stakeholder
Identification

(EXERCISE) *Facilitator Notes:* Explain the instructions below and distribute to each group 10 forms with an empty matrix such as that shown in Visual 6.5.1. Help the small groups do exercise 6.5.

Instructions:

Step 1. Select the 10 most important policies that influence your problem. Try to spread them out over several sectors. While the selection will be somewhat arbitrary, for this workshop the analytic scope of the exercise must be limited. Please be explicit about the criteria you used to choose these 10 policies because you will present the criteria to the large group along with a list of the policies chosen.

Step 2. Refer to the Source Book, and as a group answer the questions in the chart shown in Visual 6.5.1.

Step 3. Group presentation of the results of exercise 6.5. Address the following questions:

- What 10 policies are most important in terms of creating incentives for behavior causing the problem?
- What criteria did you use to select these 10 policies?
- Present the information on the 10 policy and stakeholder assessment forms.

Visual 6.5.1: Policy and Stakeholder Assessment

Policy description:			
What behavior is promoted by the policy?			
What organizations implement the policy? How are they involved?			
What groups experience the impact? How?			
What other policies are important and/or influence the way this policy affects behavior?			
What indicators might be useful to measure impact on growth, welfare, and conservation?			

**6.6
Policy Paired
Comparison**

(EXERCISE)

Facilitator Notes:

- 1. Explain the instructions below and help small groups do exercise 6.6.*
- 2. Xerox each group's completed Paired Comparison form onto acetate for presentation.*

Instructions:

Resource use behavior is the result of the interaction of many explicit and implicit policies across sectors. A good analysis identifies the direction and magnitude of the individual policies and the nature of the interaction between them. A good way to begin to do this is through a paired comparison exercise.

Step 1. Based on the analysis performed in 6.5, now do a paired comparison exercise for the 10 policies. An example is provided in Visual 6.6.1. Create a 2x2 matrix and decide for each policy pair which is the most important.

Visual 6.6.1: Paired Comparison

Problem	FOREST			AGRICULTURE AND LIVESTOCK			LAND TENURE AND COLONIZATION		MACROECONOMICS		TRADE AND INVESTMENT	
	Award process for timber concessions	Charges on concessions	Fiscal incentives and policies	Price ceilings	Credit subsidies	Pesticide subsidies						
FOREST												
Award process for timber concessions		X	Y		X	Y	X					
Charges on concessions												
Fiscal incentives and policies												
AGRICULTURE AND LIVESTOCK												
Price ceilings												
Credit subsidies												
Pesticide subsidies												
LAND TENURE AND COLONIZATION												
MACROECONOMICS												
TRADE AND INVESTMENT												

INSTRUCTIONS

1. For each sector pick the most important policies.
2. Create a 2 x 2 matrix.
3. For each pair of policies, decide which one has the most influence on your problem.
4. If the policy in the row is more powerful, place an X in the cell.
If the policy in the column is more powerful, place a Y in the cell.

You must choose only one—debate among the group and refer to the Source Book. A policy may be more important than another for several reasons:

- It appears to have the greatest impact [magnitude of impact].
- It is possible to make a change [political feasibility].
- Other policy options are not available at present and this is the next best [technical feasibility].
- It must be changed before any other policy changes can take place [sequencing].

In your group discussion consider:

- A policy may have diverse effects, both directional and magnitudinal.
- The policy's interaction with all the other policies in other sectors.
- Other policies that must be in place for it to be effective.
- Institutional relationships, values, and practices that may help or hinder its implementation [political feasibility].
- Identify groups that may be in favor or opposed to a policy change.

Have a lively discussion. There are no right answers. Use information presented in the Source Book and identify the dynamic interplay that takes place among policies.

Step 2. Group presentation of the results of exercise 6.6.

- Present the groups' paired comparison tables.
- Select three of the most difficult comparisons:

Explain the group's reason for choosing one over another

What policy conditions must be in place for effective policy reform in each pair?

What groups are likely to in favor or opposed to policy change?

SESSION 7: Policy Assessment Part Two

7.1 Objectives

- Identify policy interactions.
- Identify policy trade-offs.

7.2 Key Questions

- How do the 10 most important policies exert their influence interactively?
- What would a "perfect" set of policies look like?

7.3 Session Agenda

- Exploring policy interaction
- Creating a policy map
- Creating trade-off tables and identifying indices

7.4 Policy Ranking

(EXERCISE) *Facilitator Notes: Explain the instructions and help the small groups do exercise 7.4.*

Instructions:

Step 1. Order the 10 policies from exercise 6.5 and order them from most important to least important. When you have decided on the ranking, number the cards from 1 to 10, with 1 being the most important, and tape them together vertically.

Step 2. Present your ranked policies to the group.

- Are there any common elements shared by several policies such as dominant stakeholder groups or implementing institutions.
- Which policies were the most difficult to rank and why?

7.5
Policy
Interaction

(EXERCISE) *Facilitator Notes:* Hand out a second set of 10 blank sheets of paper and explain the instructions for exercise 7.5.

Instructions:

Step 1. All of these policies influence behavior affecting your problem, and the impact is interactive in some fashion. Starting with policy 1 and continuing through the list to policy 10 play out the following hypothetical scenarios:

Step 2. What would policy 1 have to look like in order to create incentives for sustainable use (including issues of optimal scale)? Discuss what would have to change in the policy arena to implement this perfect policy 1? On one sheet of paper write down a description of the ideal policy and a brief summary of the other changes that would have to take place for the new policy to be implemented.

Step 3. Given that you have successfully reformed the content of policy 1, assume that policy 2 exists in its present form. What would be the total effect on sustainable use of new policy 1 and old policy 2? Write down on a second sheet of paper a description of ideal policy 2 and a brief summary of the other changes that would have to take place for the new policy to be implemented.

Step 4. Given that you have successfully reformed policies 1 and 2, and policy 3 exists in its present form, what would be the total effect on sustainable use of new policy 1 and new policy 2 and old policy 3? Write down on a third sheet of paper a description of ideal policy 3 and a brief summary of the other changes that would have to take place for the new policy to be implemented.

Step 5. Continue with the exercise until you have described an ideal state for all 10 policies and have identified what would have to change for them to be implemented. When you are finished, tape the forms together vertically and hang them on the wall next to the forms from exercise 7.4.

Step 6. Explain the revised policy list to the large group.

- In the case of policy 1, what would have to change in the policy arena to implement this "perfect" policy.
- Assume that you have successfully reformed the content of policy 1 and assume policy 2 exists in its present form. How would that affect the "perfect" policy 1's ability to change behavior?
- What would a "perfect" policy 2 look like? Assuming that "perfect" policies 1 and 2 are in place, how would present policy 3 affect the ability of policies 1 and 2 to change behavior?

7.6 Creating a Policy Map

(EXERCISE) *Facilitator Notes: Hand out a set of policy circles to each group and explain the instructions for exercise 7.6.*

Instructions:

Step 1. At this point you have a good idea about which policies are probably the most important influences on your problem or project. Developing an agenda for action and implementation plan will require a better understanding of the policy arena. Using the analysis you performed today create a policy map.

This map shows the relative relationships among the policies you have identified. The Policy Synthesis section of the Source Book will give you some ideas, but this map should represent the relative weights and relationships that you have identified in this exercise. An example is provided in Visual 7.6.1.

The size of the circle represents the amount of influence the policy has on behavior. The larger the circle, the greater the influence.

The thickness of the connecting lines represents the strength of the connection. The thicker the line, the stronger the connection.

As your group develops the policy map try to identify the way each policy influences behavior. For example:

- A country's debt financing requires large amounts of foreign exchange, which, when combined with low royalties or charges on public land and a noncompetitive bidding procedure, leads to rapid deforestation, which in turn is the main motivator of soil erosion.
- The absence of land titling and active land markets: (1) reduces the effectiveness of fiscal incentives for reforestation and (2) encourages invasion of forested lands and conversion through slash-and-burn agriculture. This is often followed by larger producers who take advantage of credit and pesticide subsidies.
- Export promotion drives creation of foreign exchange for debt financing and affects soil erosion through land use promoted by other agricultural policies.

Step 2. Arrange the policy map temporarily on the table and try to develop a group consensus about the direction of policy influence and its general magnitude. Rely on your previous analyses, your knowledge of local policy impact, and refer to the Source Book. Be imaginative and creative in your analysis.

Step 3. When the group is satisfied with the map, glue it to a flip chart.

Step 4. Present the map to the large group and explain the reasoning for the placement of policies and their general relationships.

What is the direction of influence?

Which are the most important policies?

Which policies must change first?

Visual 7.6.1: Hypothetical Policy Map

Problem: Soil Erosion

Policies relevant to the problem of soil erosion might include:

Forest policies

- award process
- charges on concessions
- reforestation fiscal incentives

Land tenure and colonization policies

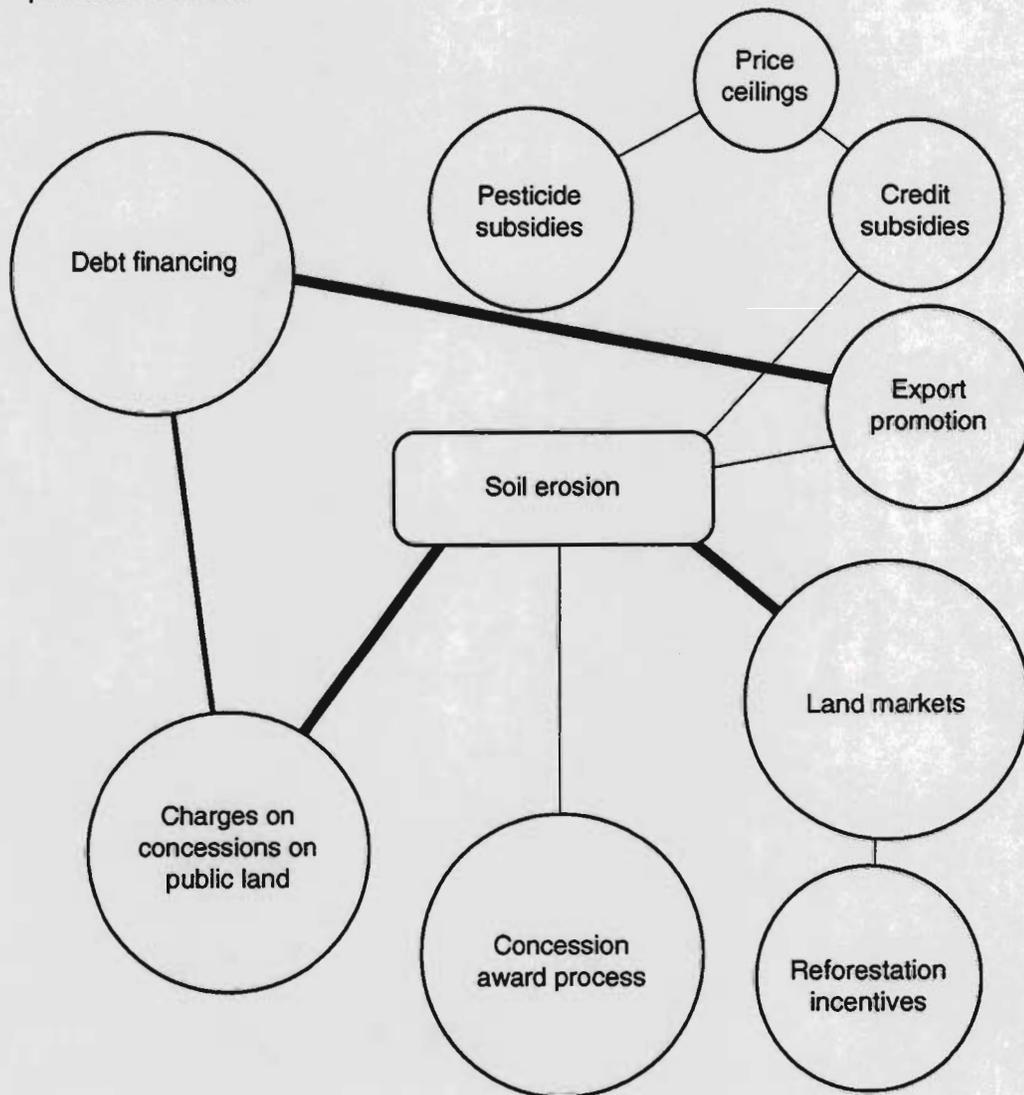
- land markets

Macroeconomic policies

- export promotion
- debt financing

Agriculture and livestock policies

- price ceilings basic foods
- credit subsidies
- pesticide subsidies



7.7
 Creating
 Trade-off
 Tables

(EXERCISE) *Facilitator Notes:* Hand out trade-off table forms and explain instructions for exercise 7.7 using Visual 7.7.1.

Instructions:

Step 1. Having constructed a policy map, now create trade-off tables that identify major interests that may be gaining or losing by this constellation of policies and the impact on growth, welfare, and conservation. For each policy identify who is likely to gain and lose by the status quo, and its likely impacts on economic growth, social welfare, and conservation along with some indicators you could use to measure impact. Refer to **Likely Impact** and **Indicator** boxes in the Source Book.

Step 2. Small group presentation to large group. For the top 5 policies, briefly explain your tables.

Who gains?

Who loses?

What are the likely impacts on growth, welfare, and conservation?

What indicators would you use to track changes in the status of the problem and changes in policy?

Visual 7.7.1: Trade-off Table

Policy	Who gains?	Who loses?	Likely impacts & identification of indicators		
			Growth	Welfare	Conservation

SESSION 8: Application of Analysis

8.1 Objectives

- Review strategies for addressing conflict
- Revisit the policy process
- Use the analysis to suggest actions

8.2 Key Questions

- How does analysis support collaboration?
- What can your organization do to improve the policy process?
- What specific activities are suggested by the analysis?

8.3 Session Agenda

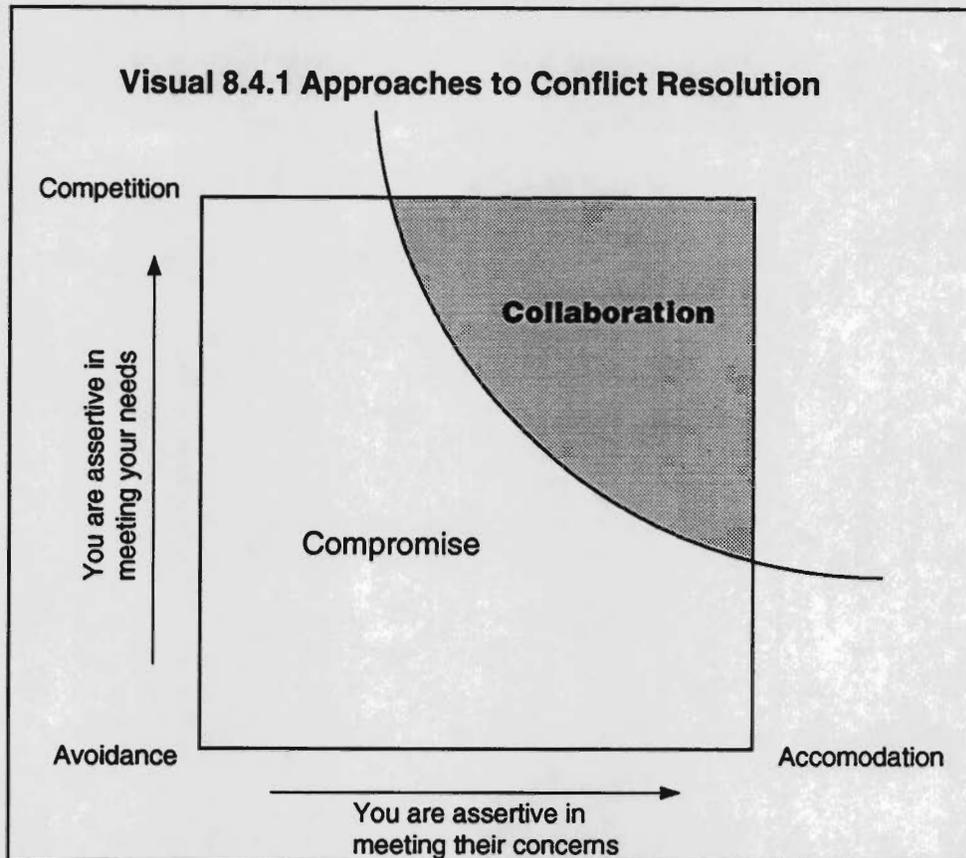
- Approaches to conflict resolution
- Revisit the policy process
- Apply analysis
- Review

8.4 Conflict Resolution

(PRESENTATION) *Facilitator Notes: Present the following materials using Visual 8.4.1.*

Participation implies differences in values, interests, and positions on desirable changes in policy. Participation implies conflict over means and ends.

Conflict can be addressed through five general organizational strategies: Competition, Avoidance, Accommodation, Compromise and Collaboration. These are illustrated below in Visual 8.4.1.



- If you are not assertive in meeting your needs, then you move downward along the vertical axis toward avoidance.
- If you are assertive in meeting the other party's needs, you move along the horizontal axis toward accommodation.
- If you are assertive in meeting your needs, but not the needs of the other party, you upward move along the vertical axis toward competition.
- If you are assertive in meeting your own needs and those of the other party, you move along both axes toward collaboration.
- In the compromise outcome both parties give up something.
- In the collaborative outcome, both parties attempt to achieve an outcome that is better than a compromise; an outcome in which no one is made worse off at someone else's expense. A collaborative solution is any point within the shaded area.

The five outcomes—avoidance, accommodation, compromise, competition and collaboration—are neither good nor bad. They are contingent on the information you have, your values, the available alternatives, and the behavior of the other parties. Because almost all policy decisions involve a redistribution

of opportunities and limitations, a collaborative outcome increases the chances of successful implementation. A participatory, transparent, information-driven analysis is an essential preparatory step to collaborative approaches to problem solving. Should collaboration be unattainable, the analysis will also help you choose wisely among the other strategies—avoidance, accommodation, compromise, competition.

In order to wisely select a problem-solving strategy, we must be able to identify unanticipated and unintentional consequences of policy and to make sure that the interests and preferences of important stakeholders are not excluded from the process. We need a way to systematically survey the total policy horizon and identify which policies might be relevant, and what their general impact might be. The taxonomy provides such a systematic approach.

The strategies of avoidance, accommodation, compromise, and competition imply win-lose outcomes. While win-win outcomes are not always possible, collaboration usually leads to a better chance of a win-win outcome and to reducing the magnitude of loss experienced by interest groups when policy trade-offs are inevitable.

Studies of successful collaboration have identified a number of important conditions, which are listed in Visual 8.4.2. The most commonly cited conditions require the kind of information that is provided by the analytical steps reviewed in this workshop. That comparison is made in Visual 8.4.3.

Visual 8.4.2: Conditions for Successful Collaboration

- Mutual respect, understanding, and trust. Members of the collaborative group share an understanding and respect for each other and their respective organizations: how they operate, their cultural norms and values, limitations, and expectations.
- Appropriate cross-section of members. The collaborative group includes representatives from each segment of the community who will be affected by its activities.
- Members see collaboration as in their self-interest. Collaborating partners believe the benefits of collaboration will offset costs such as loss of autonomy and "turf"
- Members share a stake in both process and outcome. Members of a collaborative group feel "ownership" of both the way the group works and the results or product of its work.
- Multiple layers of decision making. Every level (upper management, middle management, operations) within each organization in the collaborative group participates in decision making.
- Open and frequent communication. Collaborative group members interact often, update one another, discuss issues openly, convey all necessary information to one another and to people outside the group.

Visual 8.4.3: Most Relevant Factors that Influence the Success of Collaboration

Conditions Influencing Success of Collaboration	Information Learned through Policy Analysis Required to Create These Conditions
Mutual respect, understanding, and trust	Requires stakeholder participation and accurate assessment of their interests and capabilities, which in turn rests on transparent systematic identification of policy impact.
Open and frequent communication	Requires clear understanding of shared problems and the opportunities and limitations created by explicit and implicit policies.
Appropriate cross-section of members	Requires accurate and thorough stakeholder identification and assessment, which in turn is based on policy identification and assessment.
Members view collaboration as in their self-interest	Requires clear identification of areas of shared interests and concerns, which in turn is based on problem identification, systematic policy identification, and assessment.
Members share a stake in both the process and the outcome	Requires participation in a systematic transparent process for problem identification, policy identification, and assessment.
Multiple layers of decision making	Requires stakeholder participation and a clear understanding of areas of shared interest.

Selectively quoted from Paul W. Mattessich and Barbara R. Monsey, *Collaboration: What Makes It Work—A Review of Research Literature of Factors Influencing Successful Collaboration*. Amherst H. Wilder Foundation, 1992.

8.5
Application
of Analysis

(EXERCISE) *Facilitator Notes: Review the policy process notes on the flip chart from exercise 3.4 and ask the participants return to small groups and address the following questions.*

Instructions:

There may be representatives from different types of organizations in your group. As you answer each of the questions below, try to identify how their points of view are different from each other.

1. Given the problem you discussed, what would the policy change process have to look like so that you would consider it to be participatory, transparent, and information driven?
 - What information do you need?
 - Who should participate?
 - Should some groups have more influence than others? What kind?
 - Should any one interest group have veto power?

2. Given your organizations' missions and objectives, what role can they play to make the policy process more participatory, transparent, and information driven?

3. Given your analysis :
 - What other groups might be potential collaborators? Why?
 - What new activities, new clientele, new possibilities or limitations are suggested.

4. Based on the analyses done today in the other exercises, choose one organization's perspective that is represented by members of the group. Look at the important conditions for collaboration in Visual 8.4.2. Then design a strategy for collaboration with the groups that do not support your ideal policy set (developed in exercise 7.5).

8.6
Sharing Results
of Small Group
Exercises

(EXERCISE) *Facilitator Notes:* *Ask the groups to present the results of the work they did in exercise 8.5.*

Instructions:

- Describe an ideal policy process from your group's point of view, highlighting any differences between the organizations represented in the group.
- Describe the role your organizations can play in promoting that process.
- Describe potential collaborators and new activities that the groups might carry out to promote their interests.
- Present your strategy for collaboration.

8.7 Review of Sessions 5-8

In Sessions 5 through 8, you have:

- Used the problem-policy matrix and policy taxonomy to identify policies that are likely to have an impact on a problem.
- Created a mini-inventory of existing policies that influence a problem.
- Carried out a rapid policy assessment and stakeholder identification.
- Carried out a paired comparison and ranking exercise to identify the most influential policies and develop priorities for policy change.
- Developed a policy map and trade-off table.
- Reviewed the general approaches to conflict resolution and identified the ways analysis supports collaboration.
- Used the analysis to suggest areas of collaboration, ways to improve the policy process, and specific activities.

8.8 Key Concepts

Visual 8.8.1: Key Concepts

- Policies affect behavior, not the natural resources themselves.
- Effective strategic planning must take into account the policy context because policies change the relative advantage of different kinds of behavior.
- Explicit and implicit policies exert their influence interactively across many policy sectors, which is why it is important to systematically disaggregate their influence on behavior.
- Policies are neither good nor bad, and there are no perfect policies—today's solutions are tomorrow's problems.
- The Green Book does not provide answers; it provides a process for creating your own temporary answers and revising them as circumstances change.
- The Green Book was designed to help you create a policy process that is transparent, representative, and responsive to new information, new values, and new participants.

SESSION 9: Conclusion

9.1 Session Objectives

- Review expectations for the workshop.
- Review baseline assessments; compare them with analyses done in Sessions 7 and 8.
- Critique the workshop and record participants' suggestions for improvement.

9.2 Review of Expectations

Facilitator Notes: Present the major categories of expectations recorded during Session 0 and ask the participants to comment on how well their expectations were met by the workshop.

9.3 Review of Baseline Assessments

Facilitator Notes: Return baseline assessment forms and ask participants if their answers would be different now, and if so, how would they be different.

9.4 Feedback

Facilitator Notes: For each section ask the participants what worked and didn't work for them and what suggestions they would make to improve the exercises.

Workshop Visuals

Workshop Objectives

This workshop presents the techniques for using the Green Book Source Book to:

- Identify the set of policies that have an impact on a problem.
- Dissaggregate the impacts of the individual policy tools.
- Systematically explore the interactions among policy tools.
- Identify the opportunities and limitations that are created by an existing policy or by a proposed change in policy.
- Identify who is likely to benefit or lose from the opportunities and/or limitations created by a policy set.
- Better understand your own situation and that of other stakeholders in order to form strategic alliances.
- Make better policy choices that take into account the interdependencies among the environment, economy, and social welfare.

Policy Impacts

Across Geographical Areas

Policy: Output prices held below world market levels to subsidize urban consumers while input prices (credit, fertilizer, water) are held low.

Behavior: (a) Farmers intensify production and expand their operations to vulnerable soils, causing erosion and downstream water contamination; (b) farmers overuse chemical inputs and cause downstream pollution.

Policy: Subsidies for cattle.

Behavior: Cattle producers convert forests to pasture.

Between Nations

Policy: Pesticide residue standards for imported produce.

Behavior: Depending on market size, pesticide management and residue testing capabilities improve in the exporting country.

Between Ethnic Groups

Policy: Privatization of communal land.

Behavior: Landless colonialists displace indigenous groups by invading communal lands and converting them to small private holdings.

Between Gender

Policy: Loans and technical assistance provided only to titled landowners.

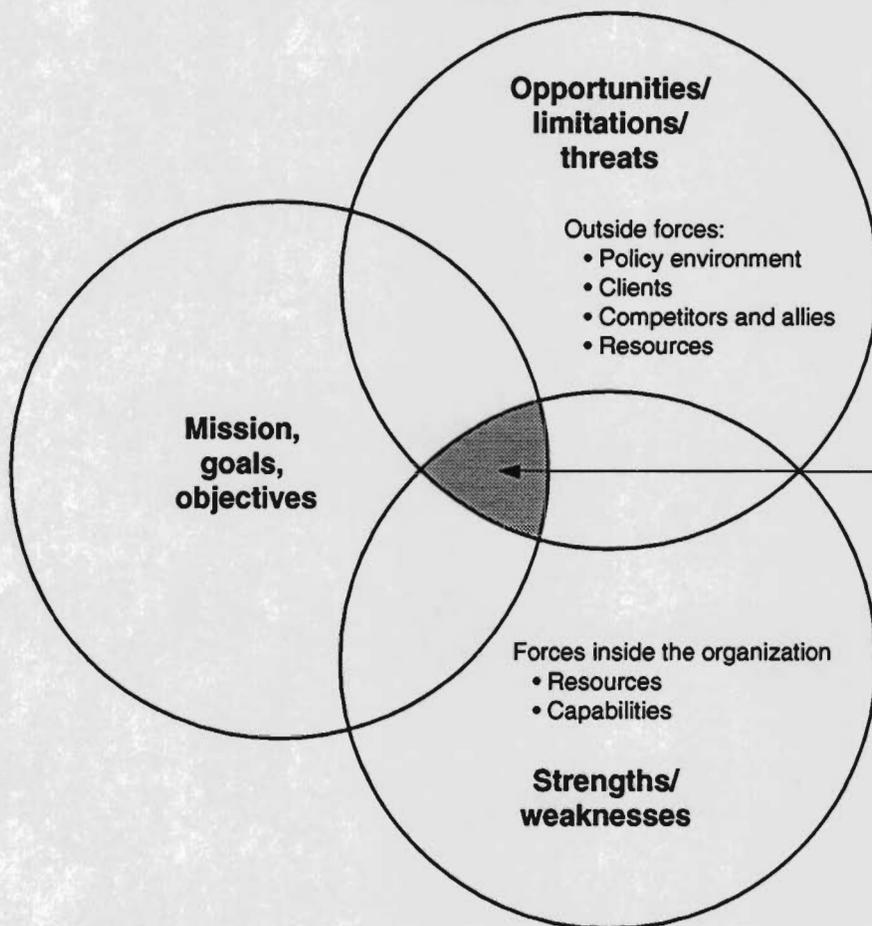
Behavior: When women traditionally do not have title to property their concerns are not considered in development programs.

Between Generations

Policy: Restriction on chlorofluorocarbon emissions.

Behavior: Welfare of future generations implicitly considered in present investment decisions.

Three Interacting Organizational Spheres



THE OVERLAP

- Strategic planning identifies what is in the overlap.
- Understanding the opportunities and limitations created by policies is a very large part of understanding the nature of the overlap.

From Bryan W. Barry. 1993. *Strategic Planning Workbook for Nonprofit Organizations*. Amherst H. Wilder Foundation.

Benefits of Analysis

Being able to disaggregate the impact of policies and identify their stakeholders will allow an organization to:

- Understand how policy combinations may or may not promote its interests and support its values.
- Identify important questions to ask and answer to make this determination.
- Understand the benefits and costs [trade-offs] associated with various alternatives.
- Identify other groups that may or may not share similar concerns and problems, and build strategic constituencies.
- Identify the points of convergence, divergence, and conflict as preparation for conflict resolution.
- Precisely identify clients and effectively design specific programmatic activities.

Five Steps of Policy Analysis

- **Problem Identification**

What are biophysical symptoms of the problem concerning a group or organization?

- **Policy Identification**

What policies motivate the behavior that causes these problems?

- **Institution and Stakeholder Assessment**

Who experiences the problem and who provides the solutions and implements policies?

- **Policy Analysis**

What is the role played by policies?

- **Application of Analysis**

Identification of important questions and recommendations for future action.

Workshop Agenda

DAY ONE

08:00-09:00	SESSION 0 - Opening Session
09:00-10:30	SESSION 1 - Problem Identification Part One
10:30-11:00	COFFEE
11:00-12:00	SESSION 2 - Problem Identification Part Two
12:00-13:30	LUNCH
13:30-15:00	SESSION 3 - Policy Identification Part One
15:00-15:30	COFFEE
15:30-17:00	SESSION 4 - Guided Tour of the Source Book

DAY TWO

08:00-10:00	SESSION 5 - Policy Identification Part Two
10:00-10:30	COFFEE
10:30-12:00	SESSION 6 - Policy Assessment Part One
12:00-13:00	LUNCH
13:00-15:00	SESSION 7 - Policy Assessment Part Two
15:00-15:30	COFFEE
15:30-17:00	SESSION 8 - Application of Analysis
17:00-17:30	SESSION 9 - Conclusion

CAUTION

Limitations of the Green Book

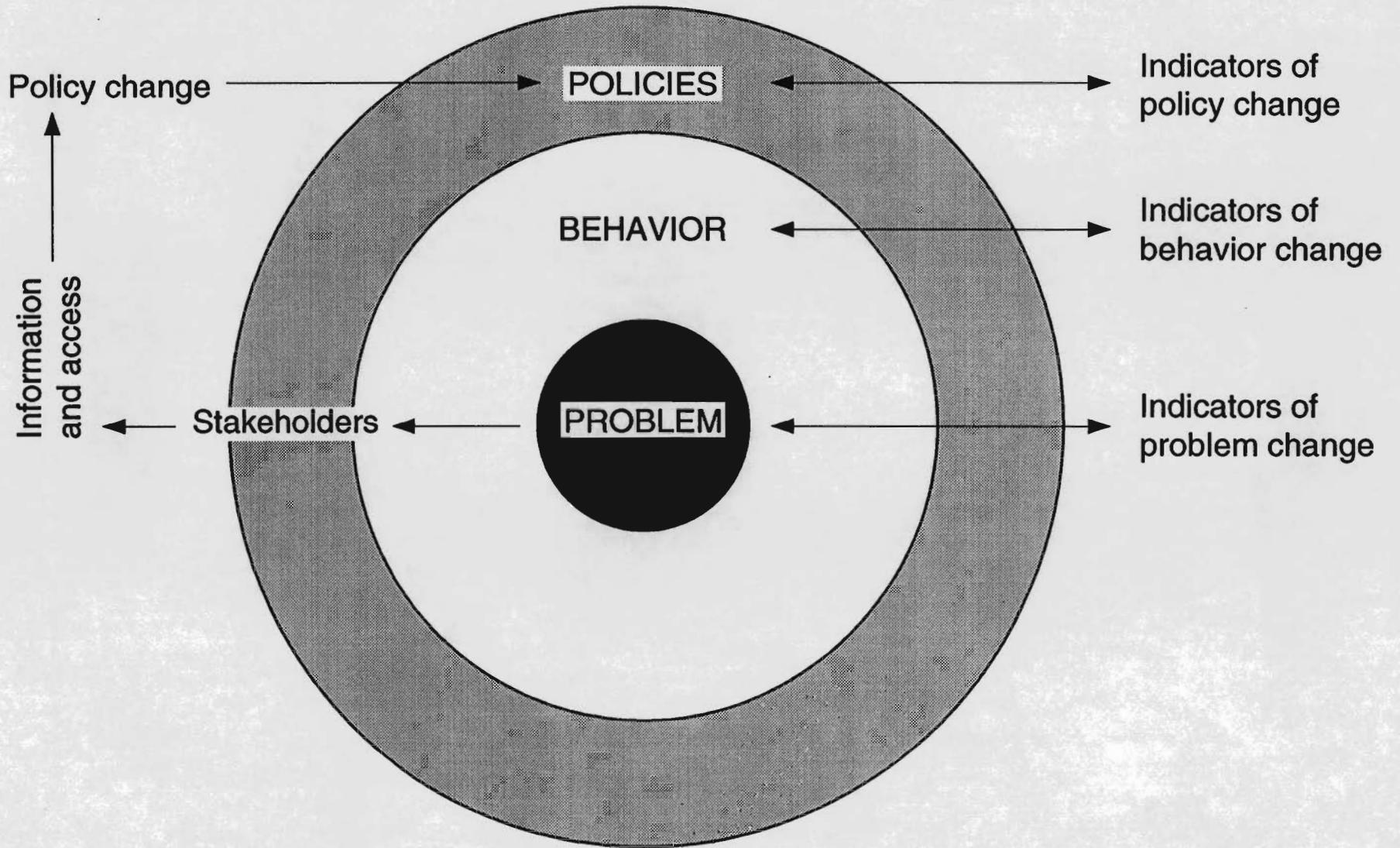
- The Green Book is a process.
- It presents new ways of thinking about policy that will help you systematically identify policy sets that affect your interests and concerns.
- There are no perfect policies.
- The Green Book does not provide answers.
- The Green Book provides a process for creating your own temporary answers and for revising them as circumstances change.

Key Concepts

- Effective strategic planning must take into account the policy context of an organization's activities.
- There are *no perfect policies* because today's solutions are tomorrow's problems.
- The Green Book is designed to help you contribute to creating a policy process that is:
 - Transparent
 - Provides representation for all participants
 - Responds to new information, new values, and new participants
- The Green Book does not provide answers; it provides a process for creating your own temporary answers and revising them as circumstances change.

Policy / Behavior / Problem

Visual 1.4.1



Visual 1.4.2: Relationship among policy, behavior, & environmental problems

POLICY	BEHAVIOR	PROBLEM
Subsidies on pesticides	People overuse pesticides	Pesticide contamination of streams
Absence of land tenure	People invade protected areas	Deforestation and loss of biodiversity
Corruption in the Forestry Department expected	People do not comply with management plans	Degradation of forest stands and deforestation
Forests stand in the way of development	Decision makers do not consider forests in their development plans	Conversion of forests to other uses

Note: In many cases, classification is open to debate, and there may be several possible combinations for each policy/behavior /problem row.

When is a problem a problem?

All decision making about policy arises because someone believes there is a problem. They want to improve their situation or someone else's situation.

What is defined as a problem is determined by:

- values
- available information about impact
- which groups have access to the decision process

New problems are identified and defined when:

- values change
- new information becomes available
- new participants gain access to the policy-making arena

EXAMPLES

Changing values: Slavery, conquest of indigenous peoples, rights of women and children, and rights of other species to exist have come be considered problems because social values have changed.

New information: The concentration of chlorofluorocarbons in the atmosphere was not considered a problem until data accumulated documenting the thinning of the ozone layer.

New participants: Women's issues were excluded from the policy process until women began to participate in government and in the market.

Environmental issues were excluded from the policy process until environmental NGOs began to represent stakeholders who were interested in the environment.

Illustrative List of Implicit Policies

- The absence of an explicit policy to regulate disposal of chemical waste into a river is an implicit policy to permit it. That implicit policy creates a distribution of opportunities and limitations. The benefits are experienced by some people and the costs are experienced by others.
- An institutional structure that makes it difficult to implement a protected areas law is an implicit policy not to protect the area. This implicit policy benefits some and not others.
- Restricted access to policymaking is an implicit policy to exclude the preferences of some groups.
- A practice that allows officials to augment their salary by collecting bribes is an implicit policy to withhold some state revenue from the normal budgeting process and redistribute it to public sector employees. It is an informal tax. Depending on the context it may also be an implicit policy not to implement an explicit policy.
- Values provide criteria for making choices and as such are a powerful source of implicit policy. For example, a value about natural resources that see forests as unlimited or an impediment to development creates implicit policies to convert them to other uses.

Explicit and Implicit Policies

Visual 1.6.2

Explicit Policies: <ul style="list-style-type: none">• Laws• Regulations• Technical standards	Implicit Policies: <ul style="list-style-type: none">• Absence of a policy• Practice or institutional characteristic• Value
Examples: Provision of subsidies for pesticides Pesticide residue specification Environmental impact assessment required for use of resources in protected area Declaration of a protected area Specific requirements for management plans Tax on idle land Minimum diameter for harvest Transport license for logs	Examples: Corruption in government generally accepted Absence of land tenure Absence of land use capability classification system Forests stand in the way of development Invasion of idle lands allowed Poor people need and deserve land Natural resources are plentiful and unlimited Inadequate personnel to evaluate EIAs in the Ministry of Natural Resources

Key Concepts

- Policies exert their influence on behavior, not on the natural resources themselves.
- The impact of behavior on the natural resources creates the problem.
- Problems are recognized as problems and motivate policy change only when those who experience the problem have access to information and to the policy arena.
- Implicit policies often exert more influence on behavior than do explicit policies.
- Policies in another sector or policies established in another country may exert more influence on behavior than policies established to manage the targeted resource.

Visual 3.4.1: Individual Baseline Assessment

	For the top 10 problems, what policies do you think are the most important?	Is your organization doing anything to address these problems? If so, what?	What needs to happen to solve the problem?	Who should do it? Where? When?
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Individual Baseline Assessment

Form 3.4.1

Policy	How is it important?	Is your organization doing anything about this problem? If so, what?	What needs to happen to solve the problem?	Who should do it? Where? When?

5

Exploration of the Policy Process

Visual 3.5.1

	Policy 1	Policy 2	Policy 3
What problem is it trying to solve?			
Who defined the problem?			
Who defined the solution (i.e., developed the policy)?			
Where would ideas for a better policy direction come from?			
Who can change the policy?			
Where would decisions be made?			
Who would participate in these decisions?			
Which groups would have to support the change?			

Characteristics of an Environmental Problem

- **Explicit and implicit policies across many sectors exert their influence on behavior interactively.**
- **These policies can modify behavior in very indirect and nonintuitive ways.**
- **We do not know exactly how policies change the day-to-day behavior at the local level.**
- **Usually the benefits are concentrated and the winners know who they are and are well organized.**
- **Generally the costs are broadly dispersed and the losers may not know who they are and are not well organized.**
- **Many of the stakeholders do not have representation in the policy process.**

Guide to the Green Book

Visual 4.2.2

THE GREEN BOOK

VOLUME 1: POLICY SOURCE BOOK

- POLICY SYNTHESIS
- PROBLEM-POLICY MATRIX
- POLICY ANALYSES

THE GREEN BOOK

VOLUME 2: METHODOLOGIES

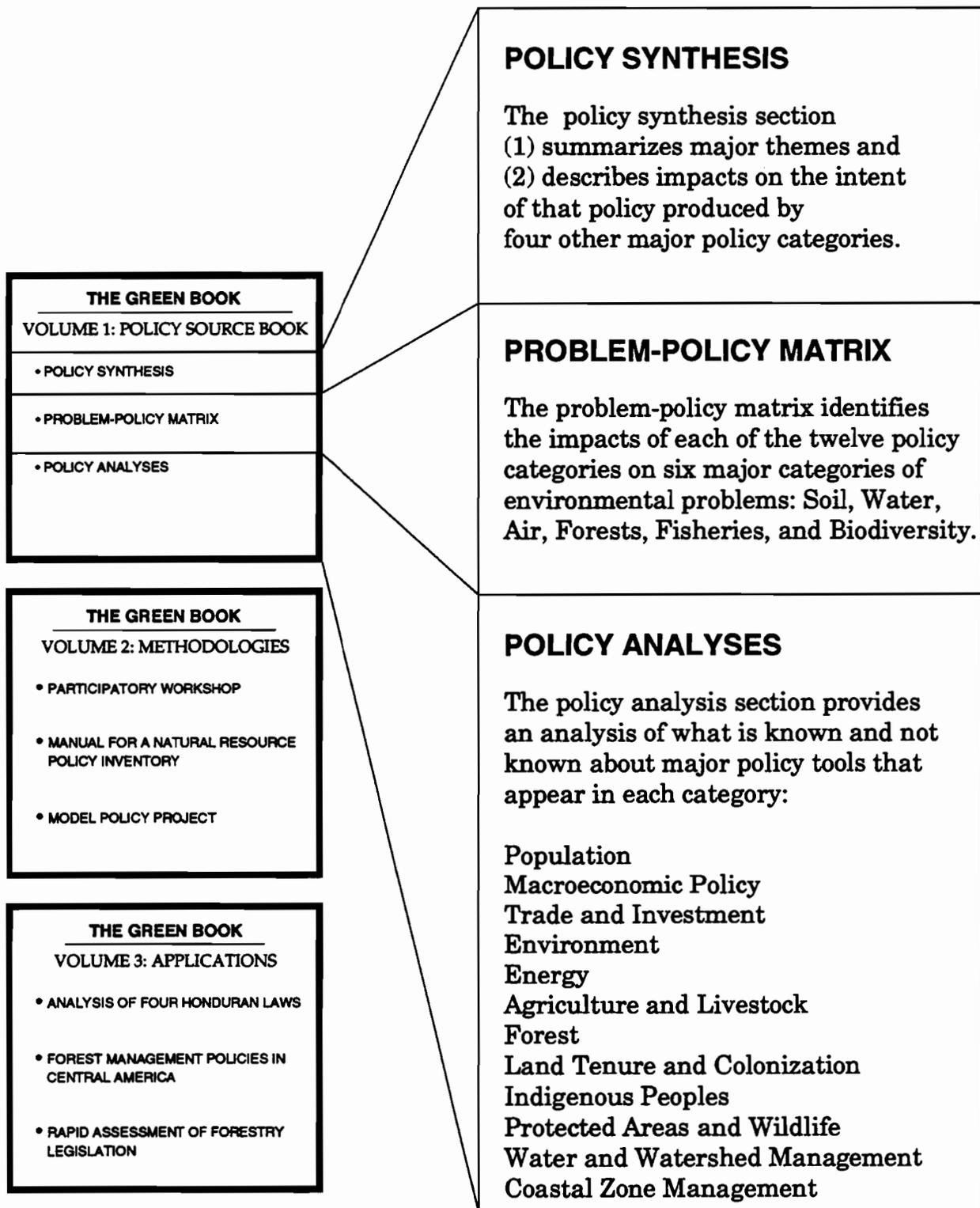
- PARTICIPATORY WORKSHOP
- MANUAL FOR A NATURAL RESOURCE POLICY INVENTORY
- MODEL POLICY PROJECT

THE GREEN BOOK

VOLUME 3: APPLICATIONS

- ANALYSIS OF FOUR HONDURAN LAWS
- FOREST MANAGEMENT POLICIES IN CENTRAL AMERICA
- RAPID ASSESSMENT OF FORESTRY LEGISLATION

Green Book Volume 1: Policy Source Book



Green Book Volume 2: Methodologies

THE GREEN BOOK
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- RAPID ASSESSMENT OF FORESTRY LEGISLATION

PARTICIPATORY WORKSHOP

- Opening Session
- Problem Identification Part One
- Problem Identification Part Two
- Policy Identification Part One
- Guided Tour of the Source Book
- Policy Identification Part Two
- Policy Assessment
- Sharing Analyses
- Conclusion

MANUAL FOR A NATURAL RESOURCE POLICY INVENTORY

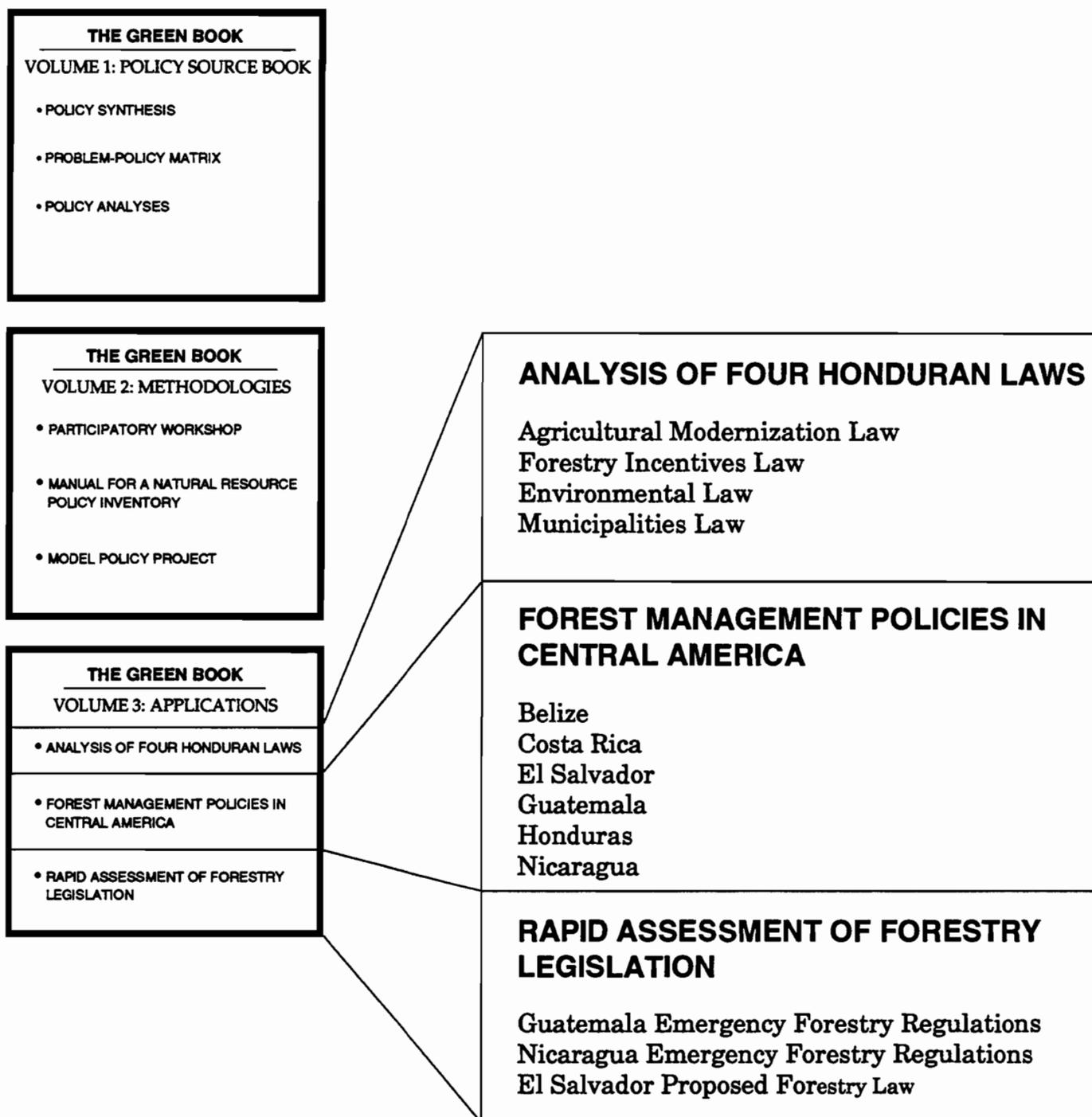
- Problem Identification
- Policy Identification
- Institution and Stakeholder Identification
- Policy Assessment
- Identification of Policy Alternatives and Research
- Implementation of a Natural Resource Policy Inventory
- Annexes
 - Team-Building Exercise
 - Taxonomy Guiding Questions

MODEL POLICY PROJECT

- Key Project Activities
 - Country Adaption of the Green Book
 - Participation
 - Dual Local and National Activities
 - Training
 - Indicators
- Project Components
 - Policy Inventory and Agenda
 - Policy Information and Analysis System
 - Policy Implementation and Education

42

Green Book Volume 3: Applications



Policy Taxonomy Category

POLICY SUBCATEGORY

KEY POINTS

- ▶ Bulleted list of important points.
- ▶ A quick reference to the content of the section.

The text describes what is known and not known about the impact of a policy on resource use. It is a summary of theory and reality and is written in nontechnical language. Stakeholder and policy implementation issues are also addressed

Likely Impacts of a Policy or Policy Change

- ▶ **GROWTH**
Short-term and long-term impacts on economic growth.
- ▶ **WELFARE**
Short-term and long-term impacts on human welfare.
- ▶ **CONSERVATION**
Short-term and long-term impacts on ability of the ecosystem to provide environmental services.

Mini-Case

Brief case studies used to illustrate specific policy situations or specific solutions to existing problems.

Indicators: Relevant Policy Subcategory

Problem Indicators: Lists potential physical and behavioral measures of problems.

Policy/Process Indicators: Lists potential policy and institutional measures that address problems.

RESEARCH QUESTIONS

These questions specify some of the gaps in the existing knowledge base.

REFERENCES

Readers who desire more information should consult these sources.

A Policy-Centered Analysis

Visual 4.4.1

Policy Synthesis	Taxonomy and general analysis	Country inventories						
		Belize	Guatemala	Honduras	Nicaragua	Costa Rica	Panama	El Salvador
Population								
Macroeconomic								
Trade and								
Environment								
Energy								
etc.								

You know the policy and are interested in its impact:

What opportunities and limitations are created?

Who is made better off? Who is made worse off? How?

- Read Policy Synthesis and identify general policy relationships.
- Read the corresponding section in the Policy Taxonomy and Analysis.
- Review your country inventory if you have one. If not perform a mini-inventory.
- Perform a rapid analysis based on the Source Book
- Use the Inventory Manual to perform a complete inventory if needed.

55

A Problem-Centered Analysis

Visual 4.5.1

	Environmental Problems					
	Soil	Water	Air	Forest	Fishery	Biodiversity
Population						
Macroeconomic Policy						
Trade and Investment						
Environment						
Energy						
etc.						

You have a problem and want to know which policies may have an impact on the behavior causing the problem:

- Identify the environmental manifestations of the problem.
- Turn to the Problem-Policy Matrix. Read the policy sections that correspond to the problem and select the policies that have an impact.
- Select the policies that seem relevant to your situation and review those sections in the Policy Taxonomy and Analysis.
- Read the Key Points and Likely Impacts tables first.
- Do these policies exist in your situation?
- Read the Policy Synthesis to identify any other important relationships that may seem important.

Note: You can design your own problem-policy matrix so that it is precisely tailored to a specific area project site or a specific set of issues.

Rapid Policy Inventory Organized around a Problem

Visual 5.4.1

Policy	Does your country have such a policy? Describe it.	If you do not know, how could you find out? Review the inventory manual for suggestions.	What has been its impact, if any?

2

Pitfalls of a System that Allocates Natural Resources through Market Mechanisms

Allocating natural resources through market mechanisms is preferable to allocating them through other systems; however, there are two serious pitfalls that policymakers must address:

1. Allocation through market mechanisms tends to favor the preferences of those who have access to markets or have resources that are exchanged in markets. Such mechanisms tend to be biased against the preferences of groups who do not participate in the economy. These groups and their values include:

Old people:	wisdom, patience, long-term perspective, transmission of culture.
Children:	future productivity, hope, unanticipated invention.
Women:	importance of preparing children for life and sustainability of subsistence resources.
Poor people:	undervalues the preferences of those who do not have generous resource endowments.
Indigenous groups:	undervalues the preferences of those who manage resources communally and/or are opposed to participation in the market.
Future generations:	uncertainty and the value of distribution of future costs and benefits.

2. Markets tend not to record the real value of many natural resources and the environmental services they provide.

Policy and Stakeholder Assessment

Visual 6.5.1

Policy description:			
What behavior is promoted by the policy?			
What organizations implement the policy? How are they involved?			
What groups experience the impact? How?			
What other policies are important and/or influence the way this policy affects behavior?			
What indicators might be useful to measure impact on growth, welfare, and conservation?			

5/5

Visual 6.6.1: Paired Comparison

Problem	FOREST	Award process for timber concessions	Charges on concessions	Fiscal incentives and policies	AGRICULTURE AND LIVESTOCK	Price ceilings	Credit subsidies	Pesticide subsidies	LAND TENURE AND COLONIZATION	MACROECONOMICS	TRADE AND INVESTMENT
	FOREST										
	Award process for timber concessions		X Y			X Y X					
	Charges on concessions										
Fiscal incentives and policies											
AGRICULTURE AND LIVESTOCK											
Price ceilings											
Credit subsidies											
Pesticide subsidies											
LAND TENURE AND COLONIZATION											
MACROECONOMICS											
TRADE AND INVESTMENT											

INSTRUCTIONS

1. For each sector pick the most important policies.
2. Create a 2 x 2 matrix.
3. For each pair of policies, decide which one has the most influence on your problem.
4. If the policy in the row is more powerful, place an X in the cell.
If the policy in the column is more powerful, place a Y in the cell.

Visual 7.6.1: Hypothetical Policy Map

Problem: Soil Erosion

Policies relevant to the problem of soil erosion might include:

Forest policies

- award process
- charges on concessions
- reforestation fiscal incentives

Land tenure and colonization policies

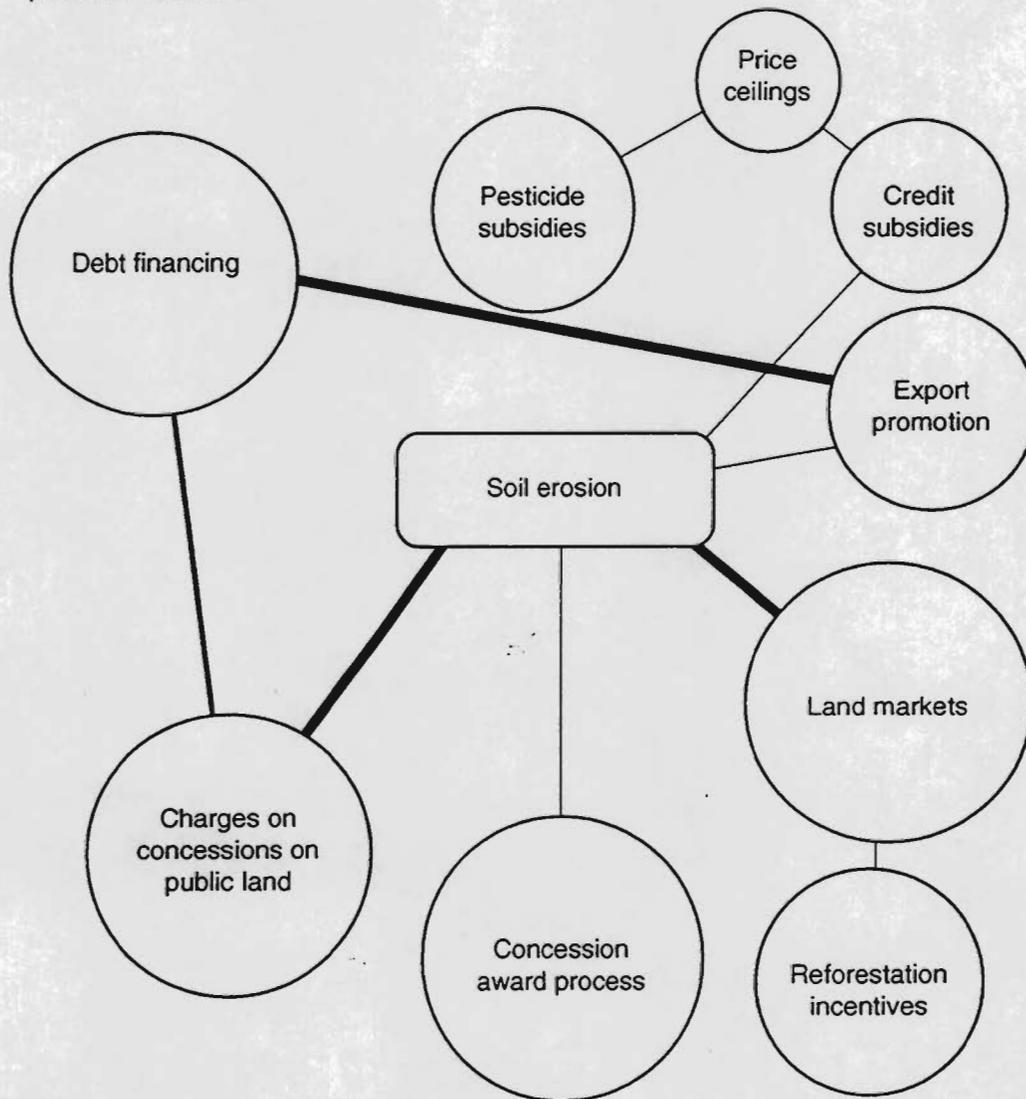
- land markets

Macroeconomic policies

- export promotion
- debt financing

Agriculture and livestock policies

- price ceilings basic foods
- credit subsidies
- pesticide subsidies



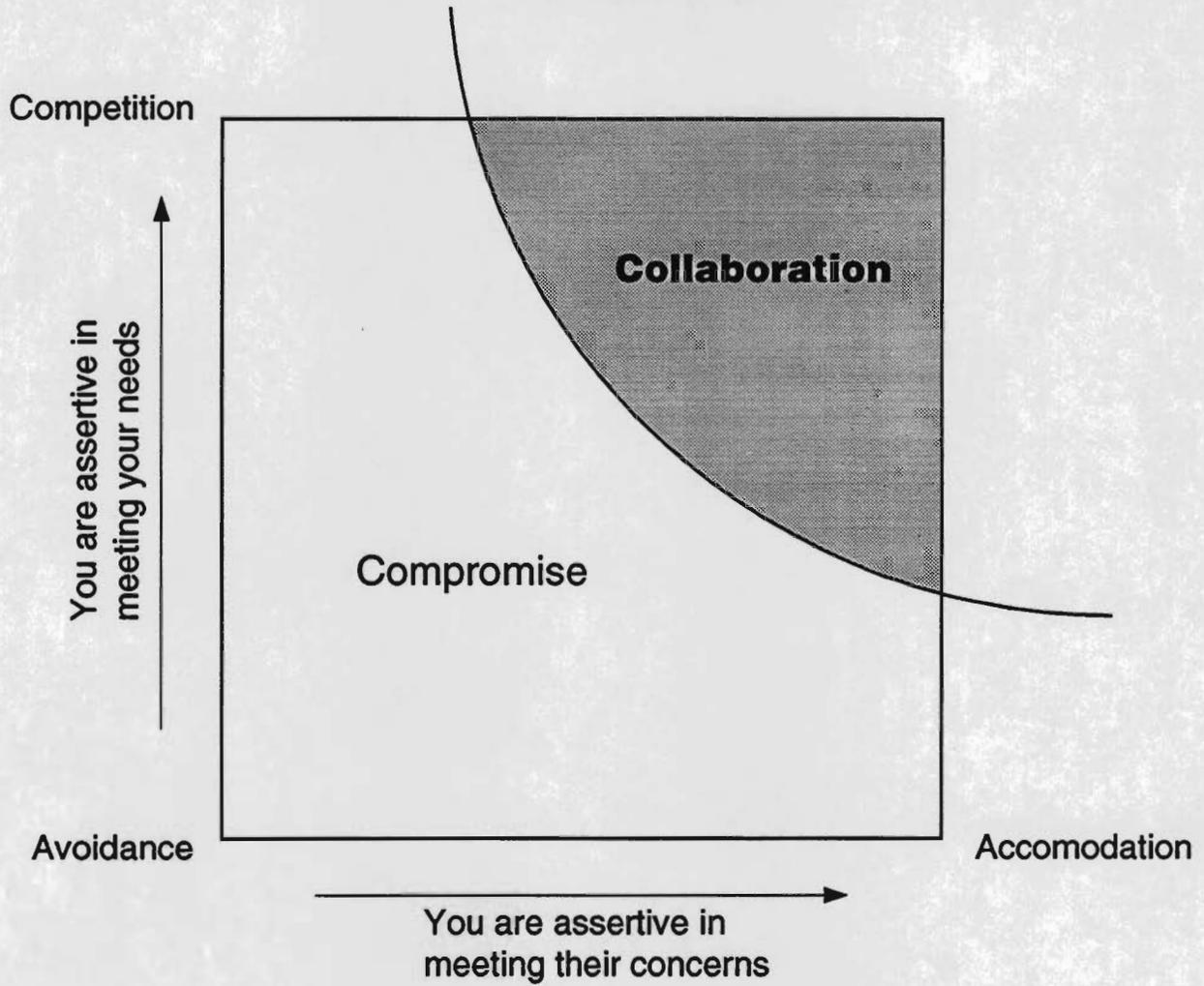
Trade-off Table

Visual 7.7.1

Policy	Who gains?	Who loses?	Likely impacts & identification of indicators		
			Growth	Welfare	Conservation

10/29

Visual 8.4.1 Approaches to Conflict Resolution



Conditions for Successful Collaboration

- **Mutual respect, understanding, and trust.** Members of the collaborative group share an understanding and respect for each other and their respective organizations: how they operate, their cultural norms and values, limitations, and expectations.
- **Appropriate cross-section of members.** The collaborative group includes representatives from each segment of the community who will be affected by its activities.
- **Members see collaboration as in their self-interest.** Collaborating partners believe the benefits of collaboration will offset costs such as loss of autonomy and “turf.”
- **Members share a stake in both process and outcome.** Members of a collaborative group feel “ownership” of both the way the group works and the results or product of its work.
- **Multiple layers of decision making.** Every level (upper management, middle management, operations) within each organization in the collaborative group participates in decision making.
- **Open and frequent communication.** Collaborative group members interact often, update one another, discuss issues openly, convey all necessary information to one another and to people outside the group.

Visual 8.4.3: Most Relevant Factors that Influence the Success of Collaboration

Conditions Influencing Success of Collaboration	Information Learned through Policy Analysis Required to Create These Conditions
Mutual respect, understanding, and trust	Requires stakeholder participation and accurate assessment of their interests and capabilities, which in turn rests on transparent systematic identification of policy impact.
Open and frequent communication	Requires clear understanding of shared problems and the opportunities and limitations created by explicit and implicit policies.
Appropriate cross-section of members	Requires accurate and thorough stakeholder identification and assessment, which in turn is based on policy identification and assessment.
Members view collaboration as in their self-interest	Requires clear identification of areas of shared interests and concerns, which in turn is based on problem identification, systematic policy identification, and assessment.
Members share a stake in both the process and the outcome	Requires participation in a systematic transparent process for problem identification, policy identification, and assessment.
Multiple layers of decision making	Requires stakeholder participation and a clear understanding of areas of shared interest.

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Key Concepts

- Policies affect behavior, not the natural resources themselves.
- Effective strategic planning must take into account the policy context because policies change the relative advantage of different kinds of behavior.
- Explicit and implicit policies exert their influence interactively across many policy sectors, which is why it is important to systematically disaggregate their influence on behavior.
- Policies are neither good nor bad, and there are no perfect policies—today's solutions are tomorrow's problems.
- The Green Book does not provide answers; it provides a process for creating your own temporary answers and revising them as circumstances change.
- The Green Book was designed to help you create a policy process that is transparent, representative, and responsive to new information, new values, and new participants.

Green Book Policy Inventory

Policy Inventory

Inventory Visuals

Inventory Team-Building Exercise

Inventory Guiding Questions

Policy Inventory

Description	1
Justification for a Natural Resource Policy Inventory	2
Goal and Objectives	3
Some Questions an Inventory Can Answer	3
Some Uses for the Answers	4
The Green Book	4
Components of a Natural Resource Policy Inventory	5
Problem Identification	9
Growth	10
Welfare	12
Conservation	12
Policy Identification	14
Policy Taxonomy	14
Problem-Policy Matrix	15
Institution and Stakeholder Identification	19
Problem-Policy Matrix and Institutional Mapping	19
Stakeholder Identification and Analysis	21
Policy Assessment	25
Preliminary Assessment of Policy Impact	25
Analysis of Policy Interactions	30
Identification of Policy Alternatives and Research Priorities	32
Potential Policy Alternatives	32
Further Analysis	34
Implementation of a Natural Resource Policy Inventory	35
Information Requirements	35
Team Composition	38
Participation	38
References	40

Policy Inventory

DESCRIPTION

A policy inventory is a comprehensive, initial step in establishing a policy dialogue, reform, and research agenda. It is a rapid appraisal technique for determining critical environmental and resource use problems and identifying policy causes related to them. The process permits an analysis of a country's policies and their impacts on how resources are used. The process also permits the user to gain valuable insights into the policy environment and gain deeper understanding of the relationship between policy and environmental quality.

A policy inventory has five primary steps: problem identification, policy identification, institution and stakeholder identification, policy assessment, and identification of policy alternatives and research priorities. Implementation of a policy inventory is structured by a policy taxonomy and analysis summary, as presented in the Green Book, Volume 1. Guiding questions for a policy inventory, keyed to the taxonomy and analysis, are provided for field inventory implementation. Those questions follow this section.

The inventory and the process contained within can benefit government and nongovernmental agencies alike in exploring the overall policy environment. At the completion of the inventory the user will have a solid knowledge of the primary environmental problems affecting the country, will have a better understanding of the policies that affect those problems and how these policies interact, and will understand the institutions and stakeholders who serve to lose or gain from the implementation of a specific policy. Only with this understanding can groups begin to build effective alliances and move to effect policy changes that will address their priority environmental problems.

A policy inventory is the first step in a larger process of policy analysis and, conceivably, policy reform. A well-developed inventory will form the foundation for further analysis, an understanding of the policy environment, and also what needs to be achieved in the policy arena in order to reach sustainable development objectives. The inventory is designed to provide the tools to assist users at all levels to create a strong foundation.

Justification for a Natural Resource Policy Inventory

A policy inventory is a first step in defining natural resource problems and their broader policy causes. It can form the basis for future dialogue, reform, and research. Other reasons for doing a policy inventory include:

- An inventory identifies many policies not initially obvious as important for natural resource problems.
- Inconsistencies, contradictions, and interactions in policies are identified in the process of performing an inventory.
- An inventory may identify gaps in our knowledge of both the general and specific effects of policies.
- Environmental strategies can be informed by the policies examined in an inventory.
- Inventories can be implemented in a participatory fashion, building a constituency for analysis and reforms.
- An inventory is flexible and can be implemented to deal with varying levels of problem and policy interaction.
- An inventory can help create awareness among community organizations and NGO's about policies and their impacts and suggest avenues for actions to address and reform specific policies.
- Inventories help to identify interest groups and stakeholders, who either benefit or lose from a specific policy and analyze how each of the groups would benefit or lose from any policy reform or change in the status quo.

Goal and Objectives

The goal of this section is to explain what a policy inventory is and how one is implemented. In addition, the policy inventory is defined and should be implemented within the context of the Green Book and the policy taxonomy and analysis in volume 1.

The specific objectives of this report are to:

- Describe the methodology and the role of the Green Book analysis.
- Provide guidance on real-life implementation issues.
- Provide detailed questions to guide a policy inventory and use of the analysis in the Green Book.

Some Questions an Inventory Can Answer

A natural resource policy inventory organizes a great deal of information targeted at answering the following questions:

- What are the critical natural resource and environmental problems?
- What are the policies that affect these problems?
- What is the nature and magnitude of the relationship between policies and problems?
- What is the role of institutions, public and private?
- Who are the key stakeholders? How are they affected by a possible change in the status quo?
- How do policies affect short-term and long-term indicators of economic growth, welfare, and conservation?
- What are the priority policies for reform and what is the likelihood of achieving reform?
- What are the priority policies for further research?

Some Uses for the Answers

The policy inventory can be used in a number of ways:

- It can outline reform and research agendas.
- It can begin the process of developing a clientele for policy reform and analysis.
- It can provide the basis for policy or program design.
- It can be an initial element in a natural resource management project.
- It can form the basis for ongoing analysis of policy issues and the evolution of environmental strategies.
- It can serve as a teaching or awareness building tool for community groups and/or NGOs who want to better understand all the forces that contribute to specific environmental problems.

The Green Book

The methodology suggested here for performing a natural resource policy inventory has evolved from earlier field efforts which resulted initially in the Green Book, Volume 1. The approach of volume 1 to create a policy taxonomy and summarize information at various levels of detail and abstraction suggested an easier or at least more comprehensive approach to the actual performance of policy inventories. This comprehensive approach involves the use of volume 1 as a guide to explore the universe of policies that affect natural resources. The structure of the Green Book can assist in directing the policy inquiry and by challenging users to expand the realm of policy considerations that can have an impact on a problem. The policy inventory is aided by the use of volume 1 of the Green Book in that it:

- Provides the taxonomic structure for policy identification.

- Provides key points, brief analyses of the likely impacts of policy changes, and summaries of analysis to support inventory field activities.
- Provides an analysis and presentation framework that requires examination of a wider array of issues than might typically occur.
- Provides a set of guiding questions keyed paragraph by paragraph to the analysis. The analysis should provide the basis for interpretation of the answers to the questions.
- While neither the analysis nor the associated questions represent the complete universe for performing a policy inventory, they provide a firm foundation upon which additions and changes can be made.

Access to the policy taxonomy occurs through the identification of priority environmental problems. If soil erosion is a serious problem that appears to be caused by deforestation and inappropriate land use practices, entrance to the Green Book can be achieved through forest management policies, watershed management policies, agriculture and livestock policies or even land tenure policies. The user can begin with the category that appears to be most relevant. The user can explore the other categories or will be led to them and to others that may not have been considered important previously.

In addition, the user can use the problem-policy matrix to identify policies relevant to the specific problems they are addressing. The policy synthesis can also inform the user about interactions between policies. These uses are explained in more detail in subsequent sections.

Components of a Natural Resource Policy Inventory

There are five major components to a policy inventory document and the process of implementing an inventory:

1. Identification of biophysical and socioeconomic problems related to the use of natural resources and the environment is step one. This establishes the scope of the study and is based upon the purposes for which the study will be used, existing

secondary information, and stakeholders at all levels. Identification of problems also provides a framework for organizing the policy assessment and facilitating the steps that follow.

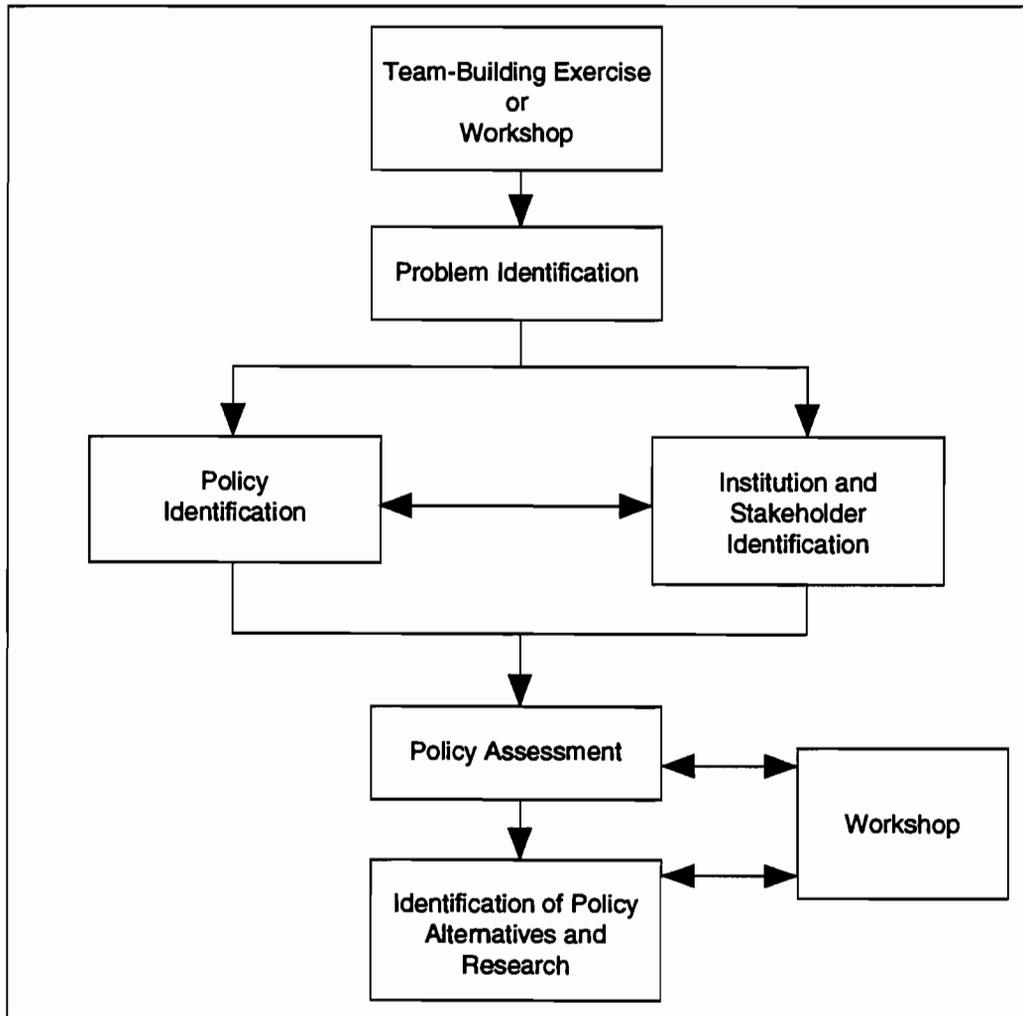
2. The second step requires identification of policies and regulations of both public and private institutions (at the regional, macroeconomic, sector, and subsector levels) that affect the natural resource base. The main objectives and/or outcomes of the policies and regulations will be stated. This is the data collection and compilation phase. The team will identify the content of major policies through an examination of secondary sources and interviews with stakeholders in the public and private sectors.
3. The identification of the public and private institutions that make or implement the policies and regulations stated in the second step comprises the third step. This description outlines the relative roles and responsibilities of relevant government and private sector institutions. The element can and should include institutional mapping and stakeholder analysis as elements of the process.
4. The fourth step is a preliminary qualitative assessment of the impact of these policies and regulations on each of the natural resources. The assessment should identify and discuss linkages, intentional and unintentional, between policies identified in step two and the problems in step one. The assessment should also identify the important trade-offs between short- and long-term economic, welfare, and conservation impacts of the current policy regime. The effects of policies or policy changes on different stakeholders should also be addressed.
5. Identification of the main policy alternatives and factors affecting possible policy reform is the fifth and last step. This requires ranking the problem areas in terms of relative importance and identifying which existing policies, if changed, or new policies if adopted, would have the greatest impact on the problems identified. At the least, the direction of the relationship, positive or negative, should be understood. The process also involves making trade-offs among multiple objectives. Areas where further research is required should also be identified and ranked.

The implementation of these steps will be a dynamic process of initial identification and subsequent revision as more is learned

and understood and as more people participate and review the results.

Implementation of the inventory will be facilitated by the use of a team building exercise annexed to this section. In addition, the Green Book workshop can be used to involve both inventory team members and other participants in both the initial and final steps of a policy inventory. These steps are shown in Figure 1.

Figure 1: Green Book Policy Inventory



PROBLEM IDENTIFICATION

The initial step in a natural resource and environmental policy inventory is problem identification. Key problems may have been documented in a national environmental strategy and action plan, an environmental profile, or other critical documents. It is the responsibility of the inventory team to provide a summary and supporting documentation for critical natural resource and environmental issues. This process requires interaction with the client and the host government. The inventory can look at a number of high-priority problems, but not at the entire range of problems.

In addition, the nature of problems may not be well understood, leading to controversy about the source of a problem. For example, the role of fuelwood collection in deforestation has been subject to much debate in countries in Central America. Physical interdependencies are also often quite complicated and difficult to describe. The severity of the problem of soil erosion will depend on soil type, slope, rainfall, and other factors that change with location and that determine the relative importance of this problem. Nevertheless, a policy inventory needs to provide from secondary sources and expert interviews a rudimentary picture of the problems.

Another approach is to carry out participatory problem identification in one-day workshops with potential natural resource stakeholders. The process is more costly and logistically challenging, but immediately initiates the participation process around the identification of natural resource problems and causes. Workshops also serve as a way to support the information gleaned from secondary sources. Day-long workshops can be organized with relative ease and can include a variety of resource users from differing socioeconomic classes. The participants would both provide information and learn about the concerns of others in the process. In a workshop it may be useful to create a matrix where the participants can identify problems, behavior and policies. Often problems are embedded in what people identify as causes and constraints. This additional information will also be useful later in the inventory process. A matrix for storing information might look like the example found in Table 1. The example illustrates the type of information and how problem definition relates to behavior and policies. The job of the analyst is to identify the level of priority for the problems identified and address them accordingly in the inventory. Secondary sources will be useful in this process as points of comparison. It is common,

however, for the client or government to identify the critical problems before the inventory begins. That leaves the task of description of the problem to the implementing team.

What problems will be addressed is determined by the level of funding. Because policy inventories are labor intensive, it is likely that the choice of problems will need to be limited.

The specification of problems must specify a number of traits and interdependencies and define a set of possible impacts. It is useful for the analyst to identify the impact of the problem and policy set (or the change in policy set) on growth, welfare, and conservation in both the short and long term and the trade-offs that flow between these categories. For instance, in some cases, conservation and growth objectives in a specific region may directly contradict each other, forcing a confrontation between divergent interests. The baseline and supporting information derived from the above analysis will be used later in the process when impacts of policy changes on each of the categories are analyzed.

Growth

Natural resource problems often require trade-offs between short-term and long-term objectives. The following list gives some guidance on aspects of these indicators. The list is indicative but not exhaustive.

- Gross national product, levels of production and productivity, and the mix of production can change over time as resources are drawn down.
- Policies that result in changes of efficiency in production, marketing, and trade can have different short- and long-term results.
- Policies that affect foreign exchange and trade patterns may improve economic conditions in the short term because of resource mining, which in the long term weakens both the economic and resource base.
- Policies that affect government resource availability, cost, efficiency, and allocation among different uses will determine whether resource management safeguards are in place.

Table 1. Relationship among Policy, Behavior, and Environmental Problems

POLICY	BEHAVIOR	PROBLEM
Subsidies on pesticides	People overuse pesticides	Pesticide contamination of streams
Absence of land tenure	People invade protected areas	Deforestation and loss of biodiversity
Corruption in the Forestry Department expected	People do not comply with management plans	Degradation of forest stands and deforestation
Forests stand in the way of development	Decision makers do not consider forests in their development plans	Conversion of forests to other uses

Note: In many cases, classification is open to debate, and there may be several possible combinations for each policy/behavior/problem row.

- Macroeconomic policies that affect inflation, interest rates, and money supply determine the time horizon for investment decisions.

Welfare

Trade-offs also occur in the welfare of groups or individuals and in the winners and losers from a policy set or change in policy set. Examples of some policies' effects on welfare:

- Policies that affect employment, income and per capita income, and prices of inputs, outputs, and food supply, by their nature affect different groups in different ways.
- Winners and losers from the current situation and from potential changes in that status quo often are not identified explicitly in policy analysis even though these welfare changes are important determinants of successful policy reform.
- The welfare of different groups is reflected in their quality of life as represented by exposure to toxic chemicals, use of marginal lands, and so on.
- Improved public sector services have different effects on different groups.
- Policies often promote use of public (and sometimes private) land as a safety valve to support increases in population.

Conservation

- Conservation or environmental aspects of trade-offs include a wide array of physical and biochemical interdependencies. At times policies supporting one conservation goal conflict with other conservation goals.
- Policies intended to improve land utilization might have an effect on the amount of area deforested, amount of marginal land under cultivation, amount of land underutilized, reforestation areas, and so forth.
- Incremental policies that affect resource use characteristics such as soil erosion and sedimentation might result in waterlogging and contamination from pesticides if irrigation is misapplied.

- Biodiversity and wildlife habitat and numbers often have complex trade-offs among different species.

The text of the problem definition segment will draw from the existing, and often incomplete, information, and more research may be required. Problems identified through a participatory approach may represent local or regional concerns that people wish to have addressed. These may have to be placed into a national context or detailed according to the geographic nature of the problem. The description should also list areas of conflict in problem definition, especially in terms of for whom the issue is a problem and why. Some of these issues might be clarified in the subsequent analysis part of the inventory. The assessment and recommendation phase of the inventory will need to address the effects of policy or policy sets on these problems.

POLICY IDENTIFICATION

A natural resource and environmental policy inventory has a broad focus. The policy analysis agenda is not limited to a sector or subsector but covers the entire range of policies, from macroeconomic policies to pricing to local user regulations. The focus of an inventory is on how the range of policies affect resource user behavior and subsequently how it affects the resource. This process cuts across institutional and political jurisdictions. In addition the policy inventory should ultimately identify policies that do not exist in a given country but that would improve the situation if adopted.

The problem definition process in step one leads into the policy identification phase. As shown in Table 1 the problem identification process will yield a list of problems and causes (which are often problems themselves). Taking the priority problems identified in step one the user can explore the Green Book policy taxonomy and begin the process of policy identification.

Policy Taxonomy

The policy taxonomy was developed in response to the need to quickly identify important policies and potential policies. The taxonomy was developed by comparing existing policy inventories of some Central American countries, and by reviewing policy studies and analyses from other regions of the world. The taxonomy is comprehensive, but may not include all policy categories relevant to a given context. In carrying out a policy inventory users are encouraged to use the taxonomy as a guide and to add to it as experiences and circumstances permit.

The policy taxonomy has been used as the basis for the structure for the Green Book. Summary information is provided on what is known and not known about the effects or potential effects of most policies. In addition, analysis of key trade-offs among growth, welfare, and conservation is provided for some policies. The Green Book also provides case studies to capture the interactions among policies and lead the user to explore the impacts of various sector policies on the specific problem of interest. This information is provided to guide the policy inventory process through example.

Problem-Policy Matrix

To specify the policies that will be examined in a policy inventory, the inventory team should early in the process create a matrix of problems and policies. The problems identified earlier form the columns of a matrix. The rows are formed by the policy taxonomy. This initial description begins the research and investigative process. During the inventory, some policies will be dropped as unimportant and others will come to light. An example of a policy matrix that could be developed in this process appears in Table 2. The number of columns depends on the various problems identified. Including the policy categories from the Green Book taxonomy allows an exploration of the relationships between the problems and the various policies. Creating and understanding these linkages represent important learning aspects of the inventory process. In addition, using this matrix allows the user to use the problem-policy matrix section of Volume 1 to determine an initial list of critical policies. otherwise, some users will immediately go to a policy taxonomy analysis to begin their analysis. The policy synthesis explores important policy interactions. Participants in the inventory will identify specific policies as well as institutions and stakeholders for each appropriate cell in the matrix. The level of detail should reflect the detail in the taxonomy and analysis chapters, not just the broad categories listed in Table 2.

Table 2. Problem-Policy Matrix.

	Soil	Water	Air	Forest	Fishery	Biodiversity
Population						
Macroeconomic Policies						
Trade and Investment						
Environment						
Energy						
Agriculture and Livestock						
Forest						
Land Tenure and Colonization						
Indigenous Peoples						
Protected Areas and Wildlife						
Water and Watershed Management						
Coastal Zone Management						

125

The matrix can be used both to describe the areas of inquiry to clients and stakeholders and to solicit input about both problems and policies from eventual end-users. If the inventory is being implemented within a participatory approach, the matrix is an easily understood method for drawing out information from those who are interested or have a stake in the outcome.

The process of filling in the matrix is educational for all who participate. It is inherently a broadening experience because those with expertise in one area will be exposed to information in other areas that is also relevant to the policy. The matrix provides a comprehensive framework for examination of a broad array of policies but also has the specificity needed to identify on-the-ground issues. For example, as the users go across each problem row, they can determine if the particular policy area is relevant to the problem. The response may be obvious or may require greater exploration and analysis. The policy taxonomy can be the first source that the users consult regarding policy relevance. If the matrix is being completed as part of a group process the policy taxonomy can be used to stimulate discussion about the relevance of the policy.

Policy Taxonomy Guiding Questions

A set of questions keyed to the policy taxonomy that are designed to guide the information-gathering process are attached to this section. Because the policy taxonomy is designed to be dynamic and to evolve over time, the questions will evolve and be refined as knowledge expands. The questions are keyed to the Green Book, Volume 1, on a topic-by-topic and paragraph-by-paragraph basis in the policy taxonomy and analysis. The analysis sets up the questions and the connection between the two allows for subsequent interpretation of the information gathered.

The questions are guiding in the sense that the information-gathering process, whether by individuals on the team reading secondary information or performing interviews or by broader participatory involvement, will not flow as the questions are organized. Information will come from multiple sources and address different policy or problem areas at the same time. The taxonomic structure and questions can, however, facilitate presentation of the results and an exploration of the relevance of a particular policy or policy sector to the identified problem.

Finally, the questions are guiding in that the specific context of a set of problem-policy issues will reveal heretofore unidentified policies or issues that add to what must be considered in the

inventory. The importance of a given set of policies will vary from situation to situation depending on the seriousness of the problem or property regime. For example, questions on forest concessions could be irrelevant while controls on private timber management could be important. Similarly, policies related to the management of protected areas are unimportant if no such areas exist and none can be created or administered due to existing structural problems. The taxonomy structure allows for a flexible framework; the guiding questions serve only as aids to stimulate a flexible process.

INSTITUTION AND STAKEHOLDER IDENTIFICATION

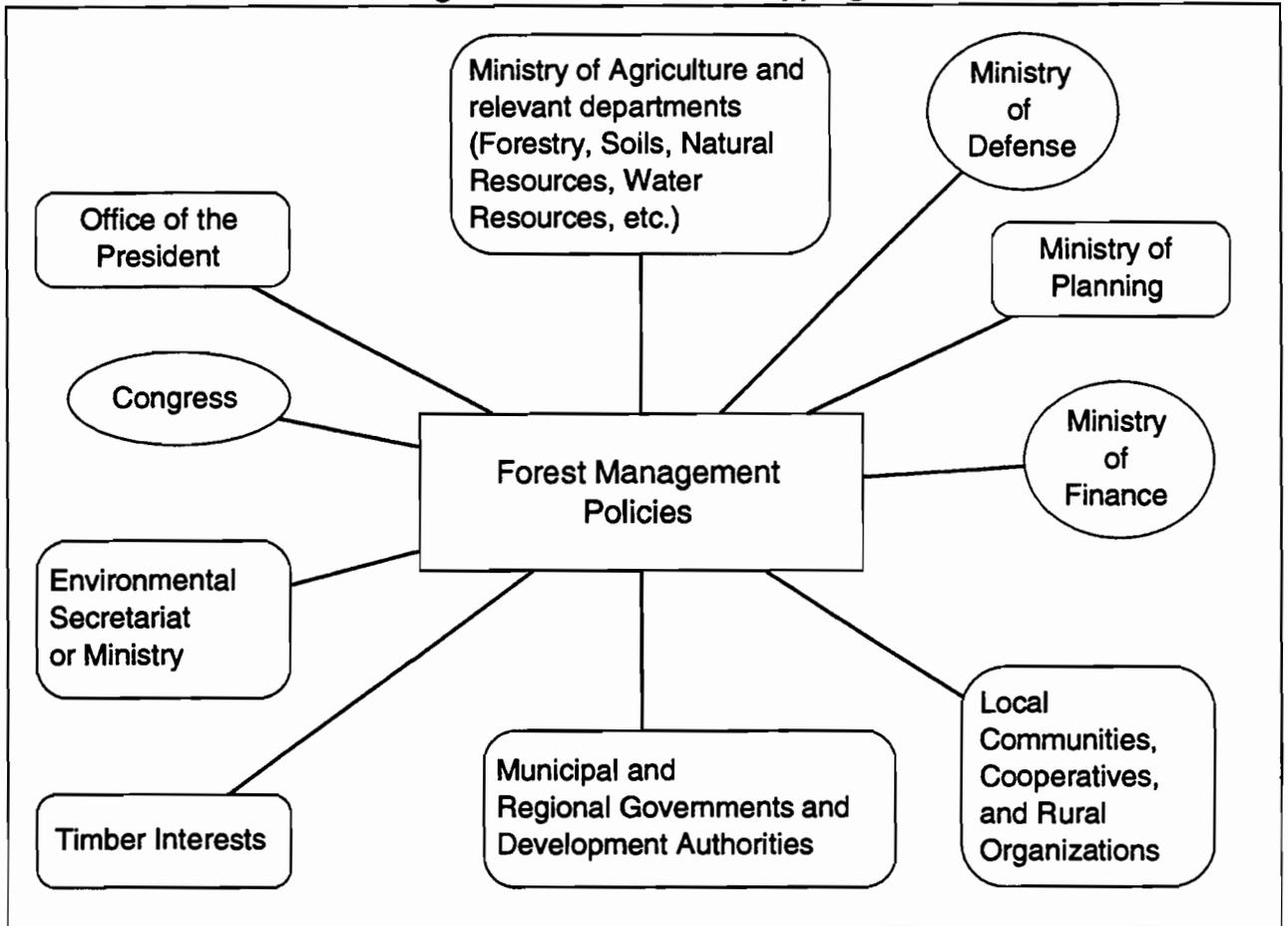
Problem-Policy Matrix and Institutional Mapping

The problem-policy matrix can also be used to identify the institutions most important to a given policy as well as the institutional issues that often inhibit or limit the application of policies. For example, many developing countries do not have sufficient technical or field staff to successfully monitor compliance with resource management or environmental requirements. Budgets are small, staff are poorly trained, or conflicts or gaps in mandates exist. In addition, other institutions that do not have a major role to play might be able to contribute to the resolution of a problem. For example, where a government agency is having difficulty enforcing controls on protected areas, policy reform could be enacted to provide a local nongovernmental organization with the legal mandate to participate in the management of the area, delineating specific responsibilities. The process of institutional mapping needs to identify actual as well as potential players in resolving resources problems.

This information can be gathered through interviews and workshops and through contributions by team members experienced or knowledgeable about these institutions. There are a number of ways to display the information depending upon the institutional situation. It is recommended that both a descriptive text that captures the nuances and details of individual institution be presented as well as an abbreviated institutional map showing the multiple institutions often involved with a particular problem-policy set. Figure 2 illustrates how to develop a map that denotes the institutions that are either involved in making policy or will be affected by and determine the course of policy.

The types of relevant information to gather for any institutional map include a list of relevant institutions, their composition, their role, and the key actors. This information can be placed in the text or detailed in a table. Table 3 provides an example of a scheme that could be used to portray the information collected about institutions, key actors, and stakeholders. More detailed descriptions will need to include the following information:

Figure 2: Institutional Mapping



- What are the functions of the institution related to this problem-policy set?
- What is the importance of the institution and its effectiveness in addressing its mandate?
- Where do institutional interests conflict or support the same objectives?
- Within the institution, where do policy decision responsibilities reside? Describe.

Stakeholder Identification and Analysis

It also is necessary to identify the primary set of winners and losers from the status quo situation and any likely or proposed changes in policies. This information on stakeholders can help clarify the incidence of costs and benefits from the current system and the problems that may arise from individuals and groups who oppose changes in the status quo. This information can be gathered at the same time as information on policies and institutions is acquired and organized. The fundamental questions are:

- Which individuals and groups benefit from the status quo set of policies?
- Who will win and lose from a change in the status quo?
- Does the incidence of costs and benefits represent a systemic pattern in the country?
- How does this distributional system affect the likelihood of policy change?

Table 3: Institution and Stakeholder Identification

Policy	Institution	Role	Key Actors	STAKEHOLDERS	
				Winners	Losers
Policy 1	Ministry (n) Dept. A Dept. B Municipality of town Q (L) Environmental NGO	Monitors compliance Collects fines	Director of Department and chief of staff located in town Q	Large landowner and private business people	Small farmers and consumers. Also communities Z Y Z who live downstream from pollution
Policy 2	Electric Authority (R)	Metering and collection	Asst. Director, Department of Collections	Electric consumers	People not connected to grid

- How does this distribution affect policy change strategy and a policy research and analysis agenda?

Some of this information will be policy specific while other information will be summary in nature and affect the concluding assessment and recommendation elements of the inventory. Most of the information will be in texts associated with each policy or institution. Other information can be summarized over policy areas. More detailed information on institutional mapping and stakeholder analyses can be found in Crosby (1992a; 1992b). Table 4 provides a matrix derived from Crosby's work in analyzing stakeholders and is an important companion matrix to the one presented in Table 3. In the first column the group is identified; the second column identifies the interest the stakeholder has in the policy or issue and, for instance, whether the stakeholder benefits or loses from the policy. Column three describes the resources that the group possesses that could affect the implementation of the policy, such as funds, special information or knowledge, or special status that could allow it to aid or constrain implementation. Column four analyzes the group's capacity to mobilize those resources and how quickly. The fifth column includes an analysis and details of the group's position and alternative options.

Both stakeholder analysis and institutional mapping represent a set of diverse tools designed to clarify the current policy situation and by doing so facilitate needed changes. Stakeholder analysis indicates whose interests should be taken into account when making a decision (Crosby 1992a). A policy inventory presents in tabular form information on groups, their interest in the problem or issue, their resources (or lack thereof) in affecting the decision, their ability to mobilize resources, and their stated or implied position on the issue.

Table 4. Stakeholder Analysis

Institution or Group	Group's Interest in the Policy or Issue	Resources Available to Aid or Constrain Policy	Resource Mobilization Capacity	Position on the Policy or Issue and Alternative Options Proposed

POLICY ASSESSMENT

Analysis and assessment of the effects of policies is a process of understanding the behavioral responses of people using a resource to a given policy change. This entails a combination of empirical observation and the use of behavioral theory. From a practical point of view there is a wide array of growth, welfare, and conservation effects from policy changes. A fundamental question is what are the effects of the policy on short-term as well as long-term conditions. Specific indicators vary from problem to problem. The indicators in the policy and analysis sections is only illustrative of a much wider set that will arise as the inventory is implemented. The challenge is to understand the dynamic interplay between a change in policy and the resulting changes in behavior to ensure that undesired consequences do not result from policy reform. The analysis must also determine for whom the benefits accrue. For example, the conservation of watersheds to prevent downstream siltation of dams may help broader regional and national economic development goals, but the economic welfare of the people living in the upper watersheds remains a question. Unless policies that work to protect soil resources also address the economic needs of small farmers who may be living in poverty, policy reform may have little value. By focusing on the issues of growth, welfare, and conservation the inventory attempts to force the discussion so that all these issues and all the players receive consideration. The decision about trade-offs can thus be made after careful consideration of all the consequences rather than in a vacuum.

Preliminary Assessment of Policy Impact

The purpose of an inventory is to reach a tentative conclusion about policy effects and potential reforms and to establish an agenda for dialogue and further analysis. Policy recommendations are derived from a process that estimates the importance of a given aspect of a problem area and identifies the policies that have the most influence on the problem and/or which may most likely be amenable to change. In a sense the analysis involves identifying which policies are the most important to change and, of these policies, which realistically can be changed or offer the greatest potential for successful reform. The decision will depend on the policy and political environment and the ability of the groups in supporting change to draw attention to the issues. The analysis and research may result in consideration and adoption

of policies that do not currently exist in the country but for which some experience in application exists in other countries.

There are two elements to the analysis. First, the inventory team must understand the perceived direction of the relationship. Whether a policy affects the problem in a positive or negative direction (and for what individuals or groups) often represents a significant step forward in the understanding of the overall problem. Second, the magnitude of the relationship may be crucial to determining the overall set of policy recommendations. This kind of knowledge, however, is much more difficult to determine within the framework of a policy inventory. On-the-ground experience of members of the inventory team or accessible to the team will facilitate this process. For example, policy reform that involves prohibitions against felling trees in the watershed to minimize erosion will benefit downslope and downstream users, but it may not benefit up-slope farmers, and in fact may have negative consequences. If these consequences are sufficiently detrimental to these farmers, they may attempt to circumvent the policies and may even adopt practices that are more detrimental to the environmental. A policy that does not take into account the needs of all resource users may be impossible to implement in the long term.

The Green Book, Volume 1, is designed to provide an initial analytic base from which analysis and assessment can begin. It is not only a framework for the inventory but also the refined and condensed experience with these policies as reflected in previous inventories and in literature review and summaries from worldwide experience. Following is a description of how the process might occur.

- A review of key points indicates that the policy is relevant to the issues of the country.
- Answers to the guiding questions provides information that can be interpreted based on the analysis in the policy taxonomy sections from which the guiding questions were derived.
- The analysis is adjusted for empirical information in the country. Additions, deletions, and corrections to reflect on-the-ground reality are summarized in the text.

- The assessment is structured around the problem areas and sub-structured around the policy taxonomy elements identified as important for the country.
- Initial analysis and assessment are empirical and value neutral; they describe the interaction, the institutional features, and the winners and losers. They do not rank the problems or causes or establish an agenda. That process should be transparent and occur in the final set of inventory activities.
- Clients and stakeholders participate on an ongoing basis to review initial drafts of the policy assessment.

This section of the inventory report requires the most skill. It is a blend of description and analysis. The Green Book, Volume 1, can facilitate the blending process, but the final analysis document will have to reflect the expertise on or available to the inventory team. The team may also need to ensure that the process includes the Green Book workshops or other participatory workshops in order to make sure the attitudes and concerns of local people are taken into account. For example, the perspective of farmers on watershed issues may differ significantly from those of electric utility managers. Understanding the perceptions and needs of grassroots resource users will help determine the magnitude of both negative and positive impacts. Table 5 offers an example of how information from a policy impact analysis could be organized. The Likely Impacts boxes found in the policy taxonomy can assist in initiating consideration of these impacts and can help fill in the first several columns of the table. The last two columns require analysis by the user and discussion with participating groups to determine both alternatives and constraints. Table 6 is completed for a policy that imposes better pesticide regulations as an example. The impacts are taken from the Likely Impacts box in the section on regulation of pesticides in the chapter titled, "Agriculture and Livestock." These impacts are meant to be demonstrative and not conclusive and to serve as a guide to further deliberation on impacts.

Table 5. Policy Impact Matrix: General

Policy	Impacts on growth	Impacts on Welfare	Impacts on the Environment	Policy Alternatives	Constraints to Adopting Alternatives
Policy 1	<p>Decrease growth in the short term in exchange for potential sustainable future growth.</p> <p>Savings in foreign growth.</p>	<p>Greater employment and better distribution of income.</p> <p>Limited economic activities in rural areas.</p> <p>Improved health conditions.</p>	<p>Lower levels of environmental pollution.</p>	<p>Policy 2 & Policy 3.</p>	<p>Corruption and lack of political will.</p> <p>No support in Congress for change.</p>
Policy 2					

Table 6. Policy Impact Matrix: Example

Policy	Impacts on Growth	Impacts on Welfare	Impacts on the Environment	Policy Alternatives	Constraints to Adopting Alternatives
<p>Better implementation of pesticide regulations.</p>	<p>1. Increased cost of production will reduce agricultural production in the short run.</p> <p>2. More efficient production will increase economic output in the long run.</p> <p>3. Greater certainty of pesticide safety may increase agricultural production in the long run.</p>	<p>1. Reduced exposure to toxic chemicals for rural population.</p> <p>2. Increased employment from integrated pest management type programs.</p>	<p>1. Reduced toxicity of soil and water.</p>	<p>1. Establishment of incentives for integrated pest management.</p> <p>2. Taxes on the import and or production of certain highly toxic chemicals.</p> <p>3. Promotion of greater research and extension into organic production.</p>	<p>1. Resistance to any controls or constraints by politically powerful groups to limit pesticide sales.</p> <p>2. Lack of knowledge base in the short term to provide viable alternatives.</p>

138

Analysis of Policy Interactions

Policy interactions on a given problem will arise as a matter of course during the implementation of a policy inventory. The problem-policy matrix, the stakeholder analysis, and the institutional mapping each provide information on policy interactions. Although it's often difficult to disaggregate these interactions, at this stage of the analytic process merely noting the interactions should suffice. These types of policy interactions can then be noted as topics for further research.

The Green Book, Volume 1 provides some guidance on policy interactions through case studies and through specific analyses of interactions in the policy syntheses. In addition, certain elements of the policy taxonomy are designed to break down the linear structure of the taxonomy and provide policy interaction information. For example, there is a separate section on livestock policies because many policy actions affect decisions on livestock operations. Ultimately an understanding of policy interactions will aid the development of an analysis and reform agenda which address cumulative, conflictive, complementary and sequential policy interactions.

It is important to keep in mind policy interactions when developing policy alternatives, especially given that many natural related policies are interrelated. For example, water quality protection policies can be easily thwarted by policies in other sectors that encourage behavior that contributes to the deterioration of water quality. Policies that promote increased industrial activity over large geographic areas will increase the number of potential sites of pollution. If subsidies or tax incentives promote technologies that are considered "dirty" or allow limited treatment of effluent water, then quality will suffer, even though more jobs may be created and economic benefits (excluding environmental costs) will be greater. Policies that promote concentration of industrial production in specific areas have a benefit in terms of air quality in and around more concentrated urban areas, but at the same time, the concentrated effluent taxes the ability of surface waters to assimilate wastes, leading to higher water pollution levels. In the interest of controlling air pollution and limiting the expenditure of foreign exchange, countries may attempt to rely on hydropower as a major source of energy. Greater use of water for hydropower may limit flow rates on many rivers and lead to higher concentrations of pollutants because the rivers no longer can effectively assimilate the wastes.

When analyzing policy interactions it is important to keep in mind the response of the various stakeholders to policy reform and the interplay of factors affecting resource use. For example, if electricity rates are raised and poorer sectors of the economy cannot afford the higher rates, they may purchase kerosene or fuelwood to meet their needs. This could have a negative impact on conservation-related issues related to deforestation, soil erosion, and air quality for example. Analysis of interactions will require prioritization to determine which problems are a priority and which impacts are most acceptable.

The above examples indicate how certain policies in one sector can override the positive intents of certain environmental policies, such as those created to ensure good-quality water. In the analysis it is important to investigate all the policies that are relevant to the identified problem and to understand the impacts of the policy on the related problem. The problem-policy matrix outlined in Table 2 is useful for this purpose and the information contained in the completed matrix can serve as a foundation for an analysis of the interactions and a determination of how a change in one policy will affect other policies related to the problem. The issue soon becomes one of trade-offs and an analysis of benefits, both short- and long-term. Such an analysis often shows that policies that promote growth dominate those that provide greater environmental and to some degree, welfare benefits. The analysis must focus on the benefits and costs over time and ensure that the effects of policy interactions on the benefits are understood.

IDENTIFICATION OF POLICY ALTERNATIVES AND RESEARCH PRIORITIES

Policy regimes or changes that have broad economic importance such as macroeconomic monetary, fiscal, and trade policies and sectoral policies are not easily connected to natural resource users and outcomes. Some issues may be clear but often many questions and research issues remain and little in the way of definitive answers. Answers often depend solely on economic theory or on broad behavioral assumptions, which may or may not apply to a real world context. Nevertheless, some conclusions can be reached relatively easily, while others, although more difficult, require immediate action because of the severity of the problem. Less severe problem issues can be deferred until more in-depth analysis and research are completed. A policy inventory should include both reform and research agenda activities, including setting priorities.

A presentation of conclusions and recommendations should include both the policy change and the policy research and analysis agenda. This will provide an understanding of what is known and what is yet to be understood.

Potential Policy Alternatives

While the understanding of many policy effects is shallow, many policies are well understood or have obvious institutional-based issues and solutions. For example, many developing countries have declared ownership of all forest areas without the ability to manage these lands. They have in effect created an open-access resource and probably hastened resource depletion. To correct this situation may require a mixture of public, communal, and private ownership, depending upon local circumstances and conditions. The objective is to identify the alternatives, a task that can be accomplished by taking the alternatives in Table 5 and comparing their positive and negative attributes to determine which alternatives make the biggest difference.

There are often many institutions with different and conflicting responsibilities for a resource. Each institution is likely to be underfunded or inappropriately staffed. Remedial activities suggest rationalization of institutional responsibilities or examination of ways to improve funding for some activities. Often positive results can be achieved by drawing attention to existing overlapping jurisdictions and having the client propose ways to

effect institutional collaboration or reform in order to remove the redundancies. These institutional alternatives should also be apparent from the stakeholder analysis and, to some degree, from Table 5. Institutional issues may appear in the column "constraints to adopting alternatives" and these institutional constraints need to be explored to create an alternative mode of operation that can contribute to improved resource management.

At this point in the inventory process participation by clients and stakeholders is critical. There is inevitably a ranking of different alternatives. Transparency in terms of the most important problems and the most important policy issues is needed because implementation of these actions will be in the hands of others. The inventory team should make an effort to ensure that these results come from a broad, participatory process. Pressures may actually be placed on the team to rank problems and policy reforms, thereby removing the responsibility from various groups, including the client. Nevertheless, the process of ranking is inevitably normative and should require a clear description of the underlying values of those doing the ranking, whether the inventory team or other participants, as well as the criteria used in the ranking process. The priorities should not be driven by only one set of values, economic theory or otherwise, but should reflect a set of criteria.

For example, the ranking of policies for reform may reflect both the need to address the policies with the greatest impact on the problem and also those with the highest probability for reform. Macroeconomic policies that have a major impact on natural resources may require a much longer time frame for reform than the elimination of disincentives to reforestation of watersheds. Also, people may be motivated by quality of life decisions rather than economic growth and those decisions may reflect their level of income and social standing. Any ranking system devised for the inventory must take these differences into account.

The above process is aided if the policy inventory and analysis are conducted in a participatory fashion. Participation of a broad range of stakeholders permits analysts to capture the interests of diverse groups and understand their priorities. The process benefits negotiations among different groups and contributes to a beneficial conflict resolution process.

Further Analysis

The Green Book workshop can be used to increase participation in the policy assessment or identification of policy alternatives phase of the inventory. The workshop will draw from the information gathered earlier in the inventory and allow participants to better understand the problem-policy relationships and potential policy options.

The agenda for further analysis and research requires clear justification for the rankings of suggested activities. This element of the inventory is often the most important because it may well be the initiating document for a policy analysis project. Gaps in policy knowledge and examination of alternatives not presently considered can be major foci of the agenda. More extensive analysis may be required to estimate the economic, social, and environmental impacts of policies to obtain a better understanding of the overall policy environment. Further refinement in understanding of trade-offs between policies and policy sets can also be justified as part of a research agenda.

IMPLEMENTATION OF A NATURAL RESOURCE POLICY INVENTORY

Information Requirements

A policy inventory draws information from (1) secondary published sources such as government reports, public and private sector bank reports, analysis performed for other projects, newspaper articles, and academic writings; (2) inventory team members with knowledgeable people in the public and private sector; (3) or participatory workshops conducted by team members with a broad base of people to elicit their concerns and perspectives regarding environmental problems. Most important, however, is the composition of the team. Inventories in Central America performed under the APAP II project involved significant host national participation through subcontracts to NGO think tank or environmental groups and consultant agreements with expert host nationals. It is easier to have the expertise directly on the team than it is to go through the time-consuming process of reviewing secondary information or performing interviews.

The type of information gathered determines the sophistication of the subsequent analysis. However, the breadth of the inventory will provide a forum for a much larger discussion of policy than will more narrow and more statistically sophisticated techniques. Where time and resources permit, the information collected from experts can be verified through the organization of participatory workshops with multilevel organizations throughout the country. The results of these workshops will expand the knowledge base of the experts on the team as well as provide perspectives regarding local and regional natural resource priorities. The process will allow the team to better understand some of the social and economic constraints to the adoption of proposed alternatives.

Process

The process of implementation of a natural resource policy inventory should be flexible: many steps are carried out simultaneously. The primary steps have each been discussed in some detail. Other activities support the following steps.

- Initiation field trip or planning activities. An initial set of activities allows the team leader to identify potential team members, meet with clients and counterparts, and identify collaborating institutions in the public and private sector. The team leader may also begin the problem definition element of

144

the inventory and, if workshops will be planned, begin to identify participants, dates, locales, and people to prepare and send invitations. If invitations are to be sent, ample time must be budgeted to deliver the invitations at least two weeks prior to the event and to provide for follow-up to confirm attendance.

- Initial field activities. With team members and counterparts identified, there will be a set of meetings to construct the problem-policy matrix using the Green Book, Volume 1. As mentioned earlier, depending on the time, this process can be conducted on a participatory basis through workshops carried out in different regions of the country.

Problem Identification

- Describe socioeconomic problems and behavior and their biophysical and resource use consequences (e.g., poverty and deforestation, population growth and soil fertility, the macroeconomic situation, and rural/urban migration).
- Identify and rank problem issues relevant to the interests of the client.
- If appropriate, perform participatory rural appraisal to identify resource user behavior and effects of policies at the local level.
- Identify baseline indicators of resource use and resource use practices for assessment and future monitoring and evaluation activities.
- Summarize problems and indicators in a text that can be reviewed by clients and stakeholders as appropriate.

Policy Identification

- Using the Green Book, Volume 1, determine which policy sets are most appropriate to the country context. Add others if needed.
- Create a matrix of policies and problems and have the inventory team and participants do initial identification of relevant policies.

- Have team members and counterparts gather information on each policy describing the main objectives and outcomes. The guiding questions attached to this section provide the structure and detail to perform this activity.
- Information should be as detailed as possible and case studies of particularly important policy or multi-policy issues should be included as separate elements of the text of the report.

Institution and Stakeholder Identification

- At the same time as policy information is gathered, inventory team members should describe important institutions and their capacity to perform their responsibilities.
- If appropriate, create institutional maps that summarize the composition, role, key actors, and key stakeholder groups related to the policy set or problem.
- If possible, replicate the aforementioned mapping activities at local levels in order to determine the field impacts of institutions and regional variation, if applicable.

Policy Assessment

- Using summary analysis in the Green Book, Volume 1, and empirical expertise on team and information by the team, provide an assessment of resource policies and institutions.
- The structure of the report will closely follow the policy/problem matrix and include as much detail as possible.
- The document should discuss the direction of the policy/problem relationship and state cumulative and linking policy issues, perhaps in separate cross-policy sections. Case study information should be included where possible.
- This document should be reviewed for accuracy by stakeholders and the client.

Policy Alternatives and Analysis Priorities

- Draft an initial set of policy alternatives and analysis recommendations.

- Have this draft reviewed by the client and stakeholders and change as appropriate.
- Draft final report and executive summary. Present findings to wider audiences.
- If appropriate, draft scopes of work for immediate policy analysis activities.

Team Composition

Team composition is obviously critical to the quality and success of the policy inventory. The approach specified here for performance of a policy inventory requires some analytic skills on the team. Generally speaking, the team leader should be a natural resource or environmental policy economist. If the inventory is a priori narrow, then forest economists or agricultural economists may suffice. However, the analytic approach versus the descriptive approach to an inventory requires a broadly based and experienced person from a decision making discipline. Other expertise on the team can include resource management specialists, social scientists, and lawyers.

Ideally team members should be experts in their fields and nationals of the country. If not experts, they need background and access to the necessary information in a relatively short amount of time. If not nationals, they must have unique skills unavailable in the country. While some of the core team will have to be full time for inventory implementation, others may be contracted on a part time basis.

If workshops are conducted the participation of small group facilitators are essential to their success. Each small group in the workshop should have a facilitator. Team members can play that role or people experienced with working with groups can be hired. The quality of the facilitators is important to ensure that group interactions are dynamic, participatory, and beneficial to the inventory process.

Participation

The implementation of an inventory can be performed by a small group without significant outside review or involvement. However, this detachment will likely limit the potential for the inventory to either inform or ultimately change the policy process. The range

of effective participation will depend on time limits and funds. Under ideal circumstances, a wide number of stakeholders could participate in the review and input process. This will require a staggered approach as each step is drafted, reviewed and finalized. The rewards from this will be a broader and deeper ownership of the final product. Some intermediate levels of participation may be needed, if funds and time are short. Implementation without significant participation will more than likely result in another unimplemented set of recommendations.

As mentioned throughout the document workshops are important vehicles for promoting participation in a policy inventory. Workshops can occur at any time throughout the process. The Green Book workshop was designed for use throughout the policy inventory process. It will function as a means of making participation in the inventory interesting as well as providing the inventory team with needed input.

In structuring and organizing the workshops the team should attempt to undertake various workshops in order to gain as wide a geographic coverage as possible. Regionally based workshops permit an understanding of a wider range of problems. For example, people living inland and farming on steep slopes may not stress the same natural resource concerns as coastal people, who make their living from fisheries. A representative geographic sample would enhance the process and ensure the quality of information captured during the inventory.

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Johnston, George, and Hilary Lorraine, et al. 1992. *The Green Book, Volume 1: A Policy Taxonomy and Analysis of Policies Affecting Natural Resources and the Environment*. Agricultural Policy Analysis Project, Phase II. Methods and Guidelines, No. 406. October.

Inventory Visuals

Justification for a Natural Resource Policy Inventory

A policy inventory is a first step in defining natural resource problems and their broader policy causes. It can form the basis for future dialogue, reform, and research. Other reasons for doing a policy inventory include:

- ▶ An inventory identifies many policies not initially obvious as important for natural resource problems.
- ▶ Inconsistencies, contradictions, and interactions in policies are identified in the process of performing an inventory.
- ▶ An inventory may identify gaps in our knowledge of both the general and specific effects of policies.
- ▶ Environmental strategies can be informed by the policies examined in an inventory.
- ▶ Inventories can be implemented in a participatory fashion, building a constituency for analysis and reforms.
- ▶ An inventory is flexible and can be implemented to deal with varying levels of problem and policy interaction.
- ▶ An inventory can help create awareness among community organizations and NGO's about policies and their impacts and suggest avenues for actions to address and reform specific policies.
- ▶ Inventories help to identify interest groups and stakeholders, who either benefit or lose from a specific policy **and in analyze** how each of the groups would benefit or lose from any policy reform or change in the status quo.

157

Goal and Objectives

The goal of this section of the Green Book is to explain what a policy inventory is and how one is implemented. In addition, the policy inventory is defined and should be implemented within the context of the Green Book and the policy taxonomy and analysis in volume 1.

The specific objectives of this report are to:

- ▶ Describe the methodology and the role of the Green Book analysis.
- ▶ Provide guidance on real-life implementation issues.
- ▶ Provide detailed questions to guide a policy inventory and use of the analysis in the Green Book.

132

Some Questions an Inventory Can Answer

A natural resource policy inventory organizes a great deal of information targeted at answering the following questions:

- ▶ What are the critical natural resource and environmental problems?
- ▶ What are the policies that affect these problems?
- ▶ What is the nature and magnitude of the relationship between policies and problems?
- ▶ What is the role of institutions, public and private?
- ▶ Who are the key stakeholders? How are they affected by a possible change in the status quo?
- ▶ How do policies affect short-term and long-term indicators of economic growth, welfare, and conservation?
- ▶ What are the priority policies for reform and what is the likelihood of achieving reform?
- ▶ What are the priority policies for further research?

Some Uses for the Answers

The policy inventory can be used in a number of ways:

- ▶ It can outline reform and research agendas.
- ▶ It can begin the process of developing a clientele for policy reform and analysis.
- ▶ It can provide the basis for policy or program design.
- ▶ It can be an initial element in a natural resource management project.
- ▶ It can form the basis for ongoing analysis of policy issues and the evolution of environmental strategies.
- ▶ It can serve as a teaching or awareness building tool for community groups and/or NGOs who want to better understand all the forces that contribute to specific environmental problems.

Relationship among Policy, Behavior, and Environmental Problems

POLICY	BEHAVIOR	PROBLEM
Subsidies on pesticides	People overuse pesticides	Pesticide contamination of streams
Absence of land tenure	People invade protected areas	Deforestation and loss of biodiversity
Corruption in the Forestry Department expected	People do not comply with management plans	Degradation of forest stands and deforestation
Forests stand in the way of development	Decision makers do not consider forests in their development plans	Conversion of forests to other uses

Note: In many cases, classification is open to debate, and there may be several possible combinations for each policy/behavior/problem row.

153-

Growth

Natural resource problems often require trade-offs between short- term and long-term objectives. The following list gives some guidance on aspects of these indicators. The list is indicative but not exhaustive.

- ▶ Gross national product, levels of production and productivity, and the mix of production can change over time as resources are drawn down.
- ▶ Policies that result in changes of efficiency in production, marketing, and trade can have different short- and long-term results.
- ▶ Policies that affect foreign exchange and trade patterns may improve economic conditions in the short term because of resource mining, which in the long term weakens both the economic and resource base.
- ▶ Policies that affect government resource availability, cost, efficiency, and allocation among different uses will determine whether resource management safeguards are in place.
- ▶ Macroeconomic policies that affect inflation, interest rates, and money supply determine the time horizon for investment decisions.

Welfare

Trade-offs also occur in the welfare of groups or individuals and in the winners and losers from a policy set or change in policy set. Examples of some policies' effects on welfare:

- ▶ Policies that affect employment, income and per capita income, and prices of inputs, outputs, and food supply, by their nature affect different groups in different ways.
- ▶ Winners and losers from the current situation and from potential changes in that status quo often are not identified explicitly in policy analysis even though these welfare changes are important determinants of successful policy reform.
- ▶ The welfare of different groups is reflected in their quality of life as represented by exposure to toxic chemicals, use of marginal lands, and so on.
- ▶ Improved public sector services have different effects on different groups.
- ▶ Policies often promote use of public (and sometimes private) land as a safety valve to support increases in population.

Conservation

Conservation or environmental aspects of trade-offs include a wide array of physical and biochemical interdependencies. At times policies supporting one conservation goal conflict with other conservation goals.

- ▶ Policies intended to improve land utilization might have an effect on the amount of area deforested, amount of marginal land under cultivation, amount of land underutilized, reforestation areas, and so forth.
- ▶ Incremental policies that affect resource use characteristics such as soil erosion and sedimentation might result in waterlogging and contamination from pesticides if irrigation is misapplied.
- ▶ Biodiversity and wildlife habitat and numbers often have complex trade-offs among different species.

150e

Table 3: Institution and Stakeholder Identification

Policy	Institution	Role	Key Actors	STAKEHOLDERS	
				Winners	Losers
Policy 1	Ministry (n) Dept. A Dept. B Municipality of town Q (L) Environmental NGO	Monitors compliance Collects fines	Director of Department and chief of staff located in town Q	Large landowner and private business people	Small farmers and consumers. Also communities Z Y Z who live downstream from pollution
Policy 2	Electric Authority (R)	Metering and collection	Asst. Director, Department of Collections	Electric consumers	People not connected to grid

157

Table 4. Stakeholder Analysis

Institution or Group	Group's Interest in the Policy or Issue	Resources Available to Aid or Constrain Policy	Resource Mobilization Capacity	Position on the Policy or Issue and Alternative Options Proposed

160

Table 5. Policy Impact Matrix: General

	Impacts on growth	Impacts on Welfare	Impacts on the Environment	Policy Alternatives	Constraints to Adopting Alternatives
Policy 1	<p>Decrease growth in the short term in exchange for potential sustainable future growth.</p> <p>Savings in foreign growth.</p>	<p>Greater employment and better distribution of income.</p> <p>Limited economic activities in rural areas.</p> <p>Improved health conditions.</p>	<p>Lower levels of environmental pollution.</p>	<p>Policy 2 & Policy 3.</p>	<p>Corruption and lack of political will.</p> <p>No support in Congress for change.</p>
Policy 2					

161

Table 6. Policy Impact Matrix: Example

Policy	Impacts on Growth	Impacts on Welfare	Impacts on the Environment	Policy Alternatives	Constraints to Adopting Alternatives
Better implementation of pesticide regulations.	<p>1. Increased cost of production will reduce agricultural production in the short run.</p> <p>2. More efficient production will increase economic output in the long run.</p> <p>3. Greater certainty of pesticide safety may increase agricultural production in the long run.</p>	<p>1. Reduced exposure to toxic chemicals for rural population.</p> <p>2. Increased employment from integrated pest management type programs.</p>	<p>1. Reduced toxicity of soil and water.</p>	<p>1. Establishment of incentives for integrated pest management.</p> <p>2. Taxes on the import and or production of certain highly toxic chemicals.</p> <p>3. Promotion of greater research and extension into organic production.</p>	<p>1. Resistance to any controls or constraints by politically powerful groups to limit pesticide sales.</p> <p>2. Lack of knowledge base in the short term to provide viable alternatives.</p>

Inventory Team-Building Exercise

Purpose of the Exercise

Problem Identification

Policy Identification

Institution and Stakeholder
Identification

Policy Assessment

Identification of Policy Alternatives
and Research Priorities

Final Discussion

Inventory Team-Building Exercise

This exercise is a companion document to the Green Book Policy Inventory. The objective of the exercise is to intensively train team members about the steps and process of a policy inventory. The exercise is designed to be carried out in one day with inventory team members including representatives of national, regional, and local governments and leaders of NGOs, cooperatives, and other organizations. The team will explore the natural resource policy environment with respect to specific socioeconomic and natural resource problems that have been identified through previous activities such as national environmental strategies, action plans, and environmental profiles.

The exercise is designed to work with a small team who will then use the exercise with other inventory participants. It can also be used with larger teams, and the participants can break into smaller groups of six to eight persons to explore different policy issues. The smaller groups can then be brought back together for open discussion in a larger group setting to compare findings. Team leaders could place people in the policy groups ahead of time to ensure diversity of opinion or to ensure the correct mix of knowledge.

PURPOSE OF THE EXERCISE

The introductory session should serve to welcome the participants, explain the agenda and purpose of the meeting, and establish the modus operandi for the day's work. This initial session will last approximately one hour.

The purpose of the exercise is to train policy inventory participants on the use of the Green Book as a reference guide and how the Green Book can be used to perform a natural resource and environmental policy inventory. The goal is to create an understanding of the purpose and implementation issues in performing a policy inventory. The inventory will include actual, or explicit, policies that result from laws or regulations and are relatively easy to identify and most probably

known by the participants. The inventory also includes policies that are less tangible, or implicit. These are more difficult to identify and include such things as the absence of a policy, institutional structures that inhibit action, certain accepted practices such as bribery, restricted access to policymaking by certain groups, and other barriers that make it difficult to address natural resource issues and problems. The exercise is designed to yield the following results at the end of the day:

- Identification of problems for analysis in the exercise will be presented by the team leader. This presentation will also include the methods to be used for problem identification in the inventory.
- Identification of policies and regulations of both public and private institutions at the regional, macroeconomic, sector, and subsector levels that affect the natural resource base. The main objective(s) and/or outcomes of the respective policies and regulations will also be identified and included in the matrix in order to develop a snapshot of the policy environment that affects the particular problem.
- Identification of the public and private institutions that make or implement the respective policies and regulations. This description outlines the roles and responsibilities of relevant government and private sector institutions. The process will involve the development of some form of institutional mapping and stakeholder analysis in order to identify the institutions and groups that are affected by and interested in the specific policy and any attempts at reform of the status quo.
- Qualitative assessment of the impact of these policies and regulations on each of the natural resources. The assessment should identify and discuss linkages, intentional and unintentional, among the identified policies. The assessment should also identify the important trade-offs between short- and long-term economic, welfare, and conservation impacts of the current policy regime. The effects of policies or policy changes on different stakeholders should also be addressed.
- Identification of the main policy alternatives and factors that affect possible policy reform. This requires ranking the problem areas in terms of relative importance and identifying which existing policies if changed, or new policies if adopted, would have the greatest impact on the problems identified. At the least, the direction of the relationship, positive or negative,

PROBLEM IDENTIFICATION

The inventory team leader will list the priority biophysical and socioeconomic problems identified, explain the source of the list, and then ask the team members if they are in agreement or whether they would like to modify the list in some way. Modifications may need to be limited to take into account time constraints. Because the number of problems will correspond to the number of groups, the team leader should be prepared to add at most one problem to the list.

Time constraints will arise as the number of problems to be analyzed increases. Limiting the process to a maximum of three or four problems may be advisable.

Policy identification can occur only within the context of specific priority biophysical and socioeconomic problems related to the use of natural resources and the environment. Because a one-day exercise offers insufficient time for participants both to identify problems and to carry out the inventory activities, the inventory team leader will have identified the four or five priority natural resource problems in the country prior to initiating the exercise. These problems will be presented to the exercise participants at the beginning of the exercise for discussion and modification as required. These priority problems can be identified from documents such as National Environmental Strategies and Action Plans, Environmental Profiles, or other relevant secondary information available in the country.

POLICY IDENTIFICATION

This session will set the stage for the other sessions in the workshop because the policies identified will form the basis for the other work carried out later in the process. Two hours is scheduled for this component.

Using the problems identified in the first activity the team leader will fill in the columns of a problem and policy matrix similar to Table 2 in the Green Book Policy Inventory. The rows of the matrix are based on the primary taxonomy categories of the Green Book, Volume 1. An example matrix of greater detail is provided for Agriculture and Livestock policies in the taxonomy.

The first part of this session is intended to familiarize participants with the Green Book taxonomy and analysis. The following activities will provide a quick tour of volume 1.

- To identify policies and their potential impact on the problems being discussed the participants should use the guide to taxonomy analysis chapter elements included in this exercise. This guide should be used to understand the type of information presented in each taxonomy section.
- If the problems being examined are related to soil, water, air, forest, fishery, or biodiversity problems, the participants should also use the problem-policy matrix and cell to examine possible relationships.
- The policy synthesis and boxes showing policy interaction will lead the participants to a wide array of potential policies that affect the problem.
- The participants will also wish to become acquainted with the inventory questions (in volume 2) and their relationship to the taxonomy and analysis sections of the Green Book, Volume 1.

Each of these tools will increase the participants' knowledge about the policies in their country that may have an affect on environmental problems. The purpose of the taxonomy and matrix is to broaden the focus of policy discussions to include policies that, while important to resource use, are seldom considered when dealing with natural resource and environmental problems.

The second part of this session asks the participants to identify important policies that affect the problems. This information will come from their own knowledge as well as from reference to the Green Book. While this list will be greatly expanded and changed during the process of a policy inventory, this initial policy identification process provides the wide scope of a policy inventory and allows the participants to understand the crucial relationship the inventory explores.

Problem-Policy Matrix

Population						
Macroeconomic Policies						
Trade and Investment						
Environment						
Energy						
Agriculture and Livestock						
Forest						
Land Tenure and Colonization						
Indigenous Peoples						
Protected Areas and Wildlife						
Water and Watershed Management						
Coastal Zone Management						

169

Agriculture and Livestock: Problem-Policy Matrix

Product Price Controls Price Ceilings Price Floors and Support Prices Price Bands					
Input Subsidies and Prices Credit Subsidies Pesticide Subsidies Fertilizer Subsidies Subsidies for Agricultural Machinery					
Direct Government Activities Input Marketing Product Marketing					
Regulation of Pesticides Direct Regulation Indirect Regulation Cross-Border Effects					
Livestock Policies Credit Policies Fiscal Incentives Tenure Policies Provision of Public Services					

171

Policy Taxonomy Category

POLICY SUBCATEGORY

KEY POINTS

- ▶ Bulleted list of important points.
- ▶ A quick reference to the content of the section.

The text describes what is known and not known about the impact of a policy on resource use. It is a summary of theory and reality and is written in nontechnical language. Stakeholder and policy implementation issues are also addressed

Likely Impacts of a Policy or Policy Change

- ▶ **GROWTH**
Short-term and long-term impacts on economic growth.
- ▶ **WELFARE**
Short-term and long-term impacts on human welfare.
- ▶ **CONSERVATION**
Short-term and long-term impacts on ability of the ecosystem to provide environmental services.

Mini-Case

Brief case studies used to illustrate specific policy situations or specific solutions to existing problems.

Indicators: Relevant Policy Subcategory

Problem Indicators: Lists potential physical and behavioral measures of problems.

Policy/Process indicators: Lists potential policy and institutional measures that address problems.

RESEARCH QUESTIONS

These questions specify some of the gaps in the existing knowledge base.

REFERENCES

Readers who desire more information should consult these sources.

INSTITUTION AND STAKEHOLDER IDENTIFICATION

This one-hour session should begin after a break. During the break the team leader should prepare a matrix for this specific exercise, then write the sector that will be discussed across the top of the matrix and then list the identified policies in the left hand column.

Once the policy identification matrix is completed the team members will begin to identify the relevant institutions and organizations involved in the policy environment. The objective in this session is to identify the institutions, both public and private, their roles in the implementation of the policy, and the key actors within each institution. For each policy there will be a listing or mapping of all the groups that have a role to play in its implementation. The mapping should take into account and identify national, regional, and local organizations and institutions. Using an (N) for national, (R) for regional, and (L) for local will help keep track of the organizations, especially if it would not be apparent to a less knowledgeable audience. In addition, where relevant, international organizations should be mentioned in the list of institutions. Often international organizations work closely with governments to develop policy and can play a major role and have a major stake in the policy. For any policy a ministry will be involved, but many different local and regional groups may also be involved depending on the impact of the policy in different regions. Some policies may be regional in nature and only affect local and regional institutions. This is the type of information that the process will reveal in the identification aspect of the process (see Table 3 in the Green Book Policy Inventory and blank provided).

The first column of the table lists the policies that were identified in the first session. In the second column the team members should list the institutions, including nongovernmental and community organizations, regional organizations, and international organizations where relevant.

Policy	Institution	Role	Key Actors	Stakeholders	
				Winners	Losers

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Coastal Zone Management: Questions

POLICIES AFFECTING THE QUALITY OF COASTAL RESOURCES

- ▶ Provide an institutional map of public and private institutional responsibilities.
- ▶ Describe development activities such as mariculture.
- ▶ Describe the resource and institutional interdependencies for the coastal zone of the country?
- ▶ Are development projects in coastal areas given preferential treatments in the form of taxes, import duties and infrastructure?
- ▶ Are there environmental regulations controlling waste? Are there consistently applied and are they effective?

Subsidies

- ▶ How do agricultural subsidies affect coastal zones?
- ▶ Do pesticides and fertilizers present serious hazards to the coastal ecosystem?
- ▶ Are export subsidies provided for mariculture?
- ▶ Do cattle subsidies affect land use in coastal areas?
- ▶ Do subsidized prices for water result in over-pumping of coastal aquifers?

Investment Incentives

- ▶ Has tourism been promoted in coastal areas?
- ▶ Has tourism development been provided investment incentives such as tax reductions and tax holidays?
- ▶ Has planning activities included tourism?

- ▶ Do incentives exist to reduce pressure on mangroves?

Fiscal Instruments

- ▶ Are taxes on effluent used to address pollution in coastal areas?
- ▶ Are user fees applicable to coastal areas? Describe.

Regulations

- ▶ What regulations control water use in coastal areas?
- ▶ Are the regulations enforced?

Voluntary Approaches

- ▶ Are voluntary efforts to control coastal resource quality used and are they effective?

Integrated Coastal Zone Management Plans

- ▶ Are integrated coastal zone management plans used to address coastal resource quality issues? How?

POLICIES AFFECTING THE USE OF COASTAL RESOURCES

Ownership

- ▶ Describe the role of public and private property in coastal areas?
- ▶ Describe the effectiveness of government ownership or regulation of coastal land.
- ▶ Does private ownership of coastal areas result in resource degradation? Are there regulatory controls on private land use decisions?
- ▶ It is often the case that the government has de jure ownership or control of coastal areas development? Describe these controls and their effectiveness? Who are the winners and

losers in this system? Is the coastal zone in reality an open-access resource?

Regulations

- ▶ What are the controls placed on private development? Are they effective? Do they result in improved or poor resource management?
- ▶ How easy is it to change resource use; for example, from mangroves to urban or tourist activities?
- ▶ Describe the regulatory system. Is it perceived to be too complicated or time consuming?
- ▶ Describe the role of mariculture and tourism.
- ▶ Who are the winners and losers from such developments? How do they affect the environment and do they contribute to increased pressure on the resource base?
- ▶ Describe the concession system for mariculture development.
- ▶ What is the economic importance of these developments? What are the negative economic, welfare and conservation consequences?

Management

- ▶ Is there an administrative structure for addressing integrated coastal zone management?
- ▶ Does the local community participate in planning and management of coastal resources?

POLICIES AFFECTING THE MANAGEMENT OF FISHERIES

- ▶ Describe the fishery control system?
- ▶ Are the policies effective at dealing with the open access nature of fisheries? Are the institutions so charges effective in meeting their responsibilities?

- ▶ Describe the cross-boundary nature of fishery issues if any? Are there bi or multinational efforts to control fisheries?
- ▶ What land based actions are affecting fisheries? Are there any policies affecting these?
- ▶ Do any of the following controls exist for any fishery? Equipment controls, catch limits, season controls, mandated fishing methods, control of fishing areas?
- ▶ Describe the private fishing sector. Do cooperatives play a role in management of fisheries?

Subsidies

- ▶ Does the government provide subsidies or credit for the fishing industry?
- ▶ How do the subsidies affect the fishery?
- ▶ How do the subsidies affect the use of the open-access fisheries?

Regulations

- ▶ How has the government tried to regulate the fishing industry? Mesh size regulations, catch limits, equipment requirements, quotas ?
- ▶ Are the controls effective in preserving the fishery?

Taxes

- ▶ Are fishing equipment or boats taxed? Does this reduce the number of fishery users?

Use Rights

- ▶ Are communities given rights to manage local fisheries? Are they effective in controlling the fishery?
- ▶ How does the community maintain control and access to the fishery?

175

- ▶ Are there harvesting rules?
- ▶ How does the government support community resource management?

Public Participation

- ▶ How does public participation in fishery decisions help or impede management of the fishery?

Water and Watershed Management:

WATER CONTROL, USE, AND PRICING

Policies Affecting Water Use

- ▶ Are user fees applied for water use of any kind?
- ▶ Do water concessions require user fees?
- ▶ If fees are not applied, how are costs of water handled?
- ▶ Do the user fees reflect the actual cost of the resource? Are flat rate or volumetric charges used?
- ▶ Is marginal cost pricing used?
- ▶ Are some users charged while other not charged? Describe the incidence of the fees.
- ▶ Are any other fees, such as water distribution fees, charged? Describe.
- ▶ Are taxes used to address pollution?
- ▶ Is water considered property of the state? If not define the property system?
- ▶ How effective has the management and control of water been in the country?
- ▶ How effective have watershed management effort been in control water use problems?
- ▶ What role do local water users play in determining water use?
- ▶ What competition exists between government units to control the use of water?

- ▶ Describe the demand for water between household, agriculture, energy and other uses?
- ▶ Who wins and who loses from the current system of allocation?
- ▶ Does the government grant water use concessions. Describe their content and implementation?
- ▶ Describe any ground water related policies and their effect on localized and general resource management problems.

Policies Affecting Water Quality

- ▶ Describe the degree of water pollution in the country and regional variations of this problem?
- ▶ What kind of policies address water quality?
- ▶ Is water pollution regulated?
- ▶ Are taxes applied to polluters?

WATERSHED MANAGEMENT

- ▶ Describe the watersheds in the country?
- ▶ Do national or regional governments address watershed management? How?

Policies Applied at the Watershed Level

- ▶ Do policies address the activities of upstream watershed inhabitants?
- ▶ Are credits and subsidies used to change resource user behavior in watersheds?
- ▶ Are downstream watershed inhabitants taxed to pay for upstream protection activities?

- ▶ What regulations control resource uses in the watershed? Are they enforced?
- ▶ Describe the land tenure situation in the watershed.

Institutional Policies

- ▶ Have management plans for the watershed been developed?
- ▶ Have institutions actively collaborated in watershed management?
- ▶ Describe the critical institutions, national and local, determining resource use in the watershed>
- ▶ Are local communities involved in watershed planning and management?

IRRIGATION PROVISION AND PRICING POLICIES

- ▶ What is the role of irrigation, both large and small projects, in agricultural production?
- ▶ What have been the environmental effects of irrigation?
- ▶ Describe the role of public sector irrigation projects.
- ▶ Is the sector subsidized? Do fees and revenues cover a significant portion of the operation and maintenance or capital costs of the project/s?
- ▶ Who benefits and who loses from the fee system or lack thereof?
- ▶ How is water rationed, price or non-price?
- ▶ Is water use efficient?
- ▶ Does low cost water affect the types of crops grown?
- ▶ How are capital costs of irrigation handled?
- ▶ Are there any water charges?

- ▶ What are the responsibilities and institutional capacity of irrigation authorities?
- ▶ What role does watershed management play in the management decisions related to irrigation?

Protected Areas and Wildlife: Questions

TYPES AND LEGAL BASIS OF PROTECTED AND RESERVED AREAS

Types of Protected Areas

- ▶ Describe strengths and weaknesses in institutional capacity.
- ▶ What policies result in increased pressure on protected areas?
- ▶ Are there any projects or policies designed to reduce pressure on protected areas? Describe. Are they effective?
- ▶ Do protected area policies address the needs of nearby residents? Are the policies command/control effort primarily aimed at protection or do they provide incentives to change behavior in other ways.
- ▶ Who benefits from the present management structure and who loses?
- ▶ Do the protected areas have clear physical limits, legal titles or records or any institutional presence.
- ▶ Describe the institutions responsible for various protected areas?
- ▶ Is the NGO community involved in management of protected areas? Describe their role.
- ▶ How much protected area enforcement is provided by the government and how much by local communities. Describe.
- ▶ Describe the protected area system? Are there scientific reserves and wilderness areas, national parks and equivalent reserves, natural monuments, habitat and wildlife management areas, protected land and sea scapes, resource reserves, natural biotic areas and anthropological reserves, or transnational parks?

Problem Resolution for Protected Areas

- ▶ Describe the role of each of the following in problem resolution for protected areas: judicial, administrative, legislative, arbitration, and popular actions and denouncements.
- ▶ Does the judicial system have integrity or is there corruption?
- ▶ Is the judicial system sensitive and informed about environmental issues? Are there special environmental courts?
- ▶ What administrative regulations address protected areas? Are they effective? Does the institution have the capacity to enforce regulations?
- ▶ Is the legislature informed and involved in protected areas issues?
- ▶ Has arbitration and mediation been applied to protected areas issues?
- ▶ If popular action and denouncements exist, who has used them? Have they been effective?

Land Use Policy and Issues

- ▶ Are management plans required for protected and reserved areas?
- ▶ Does land use classification and planning exist? Are they applied to the creation of protected areas?
- ▶ Do institutional mandates conflict over protected areas management? Give examples?
- ▶ What is the role of private property in protected areas? Does the government have to compensate the landowner if land is expropriated for protected areas?
- ▶ Are there examples of private nature reserves?

- ▶ Do conservation easements exist? How much land is under conservation easements?

RESOURCE MANAGEMENT AND THE LOCAL COMMUNITY

Community Participation

- ▶ What is the role of local communities in the design, planning, and management of protected and reserved areas?
- ▶ Is community participation required? Is it effective?

Direct Cash Incentives And Disincentives

- ▶ Are there cash incentives which attempt to change behavior such as entry or user fees the returns from which support local communities?
- ▶ Describe the cash incentives and positive and negative effects?
- ▶ Are there cash rewards for protection activities?
- ▶ Have subsidies been used to stimulate reforestation, or wildlife management projects?
- ▶ Are there cash incentives for retiring land (or land banks) to save fragile lands or ecosystems?
- ▶ Are the cash incentives large enough to change resource user behavior?
- ▶ Is credit made available which improve production outside of the protected areas, reducing pressure on the protected areas?
- ▶ Are buffer zone residents paid for conservation activities?
- ▶ Are fines levied as disincentives related to protected areas? Are they enforced? Are the fines large enough to affect behavior?

In-Kind Incentives and Disincentives

- ▶ Do disincentives such as jail sentences, confiscation of land or elimination of use rights exist? Do the institutions with such responsibilities have the capacity to implement such actions?
- ▶ Are programs such as food for work used to support protection or conservation activities?
- ▶ Is equitable access to protected areas for renewable resources such as building materials, etc provided? Is the access equitable? If not, who wins and who loses?

Fiscal Incentives and Disincentives

- ▶ What fiscal incentives exist for conservation activities? Taxes, price supports, insurance, guarantees, preferential access to credit or debt swaps, among others?
- ▶ What is the role of foreign/donor governments in providing either project or programmatic support for such incentives?
- ▶ Are there disincentives such as refundable damage deposits or reforestation deposits, taxes as disincentives for destructive land development, or pollution taxes on firms locating near protected areas?
- ▶ Are tax deductions, exemptions or credits offered to individuals or corporations and applied to taxes (on land, sales, inheritance or capital) in return for conservation activities around protected areas? Are they effective in changing behavior? Who are the primary beneficiaries of such incentives?
- ▶ Do import taxes and duties support importation of conservation equipment? Describe.
- ▶ Do depreciation rules encourage conservation activities? Describe.

- ▶ Do resource use enterprises such as butterfly farms or crocodile farms exist as a result of fiscal incentives?

FINANCING

- ▶ Are funds for protected area management allocated in regular or special budgets?
- ▶ Are funds provided by donors or lenders?
- ▶ Are protected area benefits taxed? Hotel taxes? Airport departure taxes, franchises or concessions?
- ▶ Are entrance fees charges for protected areas? Describe.
- ▶ How are the fees used? For local communities or for the national budget?
- ▶ Are the fees resulting in over exploitation?
- ▶ Are fees varied for different groups?
- ▶ Does the protected area have control over or own nearby agricultural areas? Does any income result from such control or ownership?
- ▶ Are water charges used to pay for the down stream benefits of protected areas?
- ▶ Have taxes on extracted resources or for protected area generated benefits been used to establish special environmental funds or otherwise support protected areas? describe.
- ▶ Does an environmental maintenance tax exist or do endowments exist for protected area establishment or management?
- ▶ If the Ngo or private sector is involved in providing protected area services, how do they finance their activities?

- ▶ Are there any requirements such as reforestation or conservation or support for community economic development for those given resource extraction concessions? Describe? Do they work?

International NGOs

- ▶ Describe the activities of international, national and local Ngos in establishment, management and financing of protected areas?
- ▶ Are there any conservation trust funds to support protected areas?
- ▶ Are there any debt-for-nature swaps supporting conservation efforts? Describe.

Foundations, Trust Funds, and Endowment Funds

- ▶ Are there any legally established corporations or charities supporting protected areas? Describe.
- ▶ Describe the role of foundations in the establishment and preservation of protected areas?

PL-480 Funds

- ▶ Are Pl-480 funds used to support protected areas or food for work programs? Describe.

Foreign Aid

- ▶ Describe the role of aid agencies in the establishment and maintenance of protected areas?

Joint Government-NGO Financing

- ▶ Describe joint government/donor and Ngo financing of protected areas?

- ▶ Have protected areas established with such support been successful or more successful than other efforts?

Debt-for-Nature Swaps

- ▶ Describe the debt for nature swaps and the role of various parties.

Bilateral Debt-for-Nature Swaps

- ▶ Are there any debt for nature swaps under the Enterprise for the Americas Initiative? Describe.

INTERNATIONAL CONVENTIONS AND SUPPORT

- ▶ Describe the international conventions to which the country is a party.
- ▶ Are any wetlands designated under this convention? Is it adequately protected?
- ▶ Is the country a party to this treaty?
- ▶ Are there any sites designated under this treaty?
- ▶ Does the country pay into the fund?
- ▶ Is the country a party to this agreement?
- ▶ Does the country contribute to the International Fund for the Conservation and Utilization of Plant Genetic Resources?

NATURE TOURISM

- ▶ Describe the role of nature tourism in the country.

- ▶ Are there earmarked tourist based taxes supporting a specific park or the park system?
- ▶ Is nature tourism actively encouraged?
- ▶ Describe the costs and benefits of nature tourism to the country?
- ▶ Are specific fees or taxes used to capture the benefits associated with provision of protected areas?
- ▶ Describe the entrance fee structure and how that revenue is distributed or used.

WILDLIFE PROTECTION AND TRADE

International Conventions

- ▶ Is the country a member of Cites?
- ▶ Does it enforce Cites prohibitions or restrictions?
- ▶ Has the government listed any species on any of the three Appendices? Attach the list.
- ▶ Does the government have the institutional capacity or interest in enforcement of Cites?
- ▶ Describe the internal and external importance of wildlife trade? Who are the primary beneficiaries?

Export Controls And Cross-Border Issues

- ▶ What is the demand for wildlife indigenous to the country?
- ▶ Does the country conform to the Convention of Migratory Species of Wild Animals protecting migratory species?

- ▶ Do national laws, regulations, or export and import restrictions exist? List species and success/failure at implementation.
- ▶ Is there indication or evidence that wildlife trade has been curtailed by such controls?
- ▶ Is the trade in certain species so lucrative as to make prohibitions or restrictions difficult to implement? Describe.

Hunting Laws

- ▶ Describe hunting laws? Are they effective?
- ▶ Are fines imposed for breaking the law and are the fines large enough to affect behavior if collected?

Indigenous Peoples: Questions

INDIGENOUS LAND RIGHTS

- ▶ Does individual land rights supercede communal land rights of indigenous peoples?
- ▶ What is the degree of colonization, legal and spontaneous, on indigenous peoples land?
- ▶ Do indigenous people have secure tenure? Is the land owned officially by the government? Is government ownership effective in controlling land invasions?

Values, Assumptions, and Policy Guidelines

- ▶ What values drive indigenous peoples policy in the country? Are they considered inferior and an obstacle to development?
- ▶ Are indigenous people occupation of forest land considered means of sustainably managing those resources?
- ▶ Do indigenous peoples have legal and political standing as well as participation in national discussions on their future and the future of forest resources?
- ▶ Do programs exist to learn from indigenous land management practices?
- ▶ Are there government and non-government organizations involved in addressing indigenous peoples rights? What role do indigenous peoples play in these organizations?

RESOURCE MANAGEMENT

- ▶ What policies or management strategies exist to simultaneously address conservation of natural resources and indigenous peoples goals?

- ▶ Are laws and enforcement capabilities in place?
- ▶ Describe the policy environment surrounding indigenous peoples and the rights they have or do not have, human and land?

Exclusion From Parks And Protected Areas

- ▶ Are indigenous people excluded from using protected areas? Are other groups allowed to use protected areas?
- ▶ Are indigenous people involved in the management decisions associated with protected areas? Give examples.

National And Indian Parks

- ▶ Are there national or Indian parks?
- ▶ Do the parks allow any modification?
- ▶ Are the indigenous people allowed to change or develop such lands?

Conditional Occupancy And Use

- ▶ Are restrictions placed upon what technologies can be used by indigenous peoples?
- ▶ Do extractive reserves and extractive forests limit technology options?

Priority Use

- ▶ What conflicts in use and technology used exist between indigenous and other users?
- ▶ What access to the resources do indigenous and other peoples have?

151

**Lease-Back
Provisions**

- ▶ Do situations exist where indigenous peoples have title and can then lease the land to conservation agencies or groups?

**Compensation
for Conservation**

- ▶ Are indigenous peoples compensated for foregone benefits as a result of conservation activities?

**Biosphere
Reserves**

- ▶ Have biospheres been established?
- ▶ How effectively are they managed? Do indigenous people have a role in their management?
- ▶ Have the boundary of biospheres and their components been effectively protected? describe the problems and policies which may cause such problems.

**Management
and Research**

- ▶ Are indigenous groups directly involved in the management of the protected area and in research designed to support a sustainable management system? Describe.
- ▶ Do indigenous groups have input into or control over specific decisions on resource use, ie hunting, gathering, etc.?

**Forest Parks
and Refuges Catering
to Ecotourism**

- ▶ Have indigenous groups turn land under their control into parks or protected areas?

- ▶ Do they receive income from these parks, for example from ecotourism?

Recreational Development

- ▶ Have indigenous peoples been involved with recreational developments?
- ▶ Have they benefited or been hurt by recreational developments?

Protection Of Boundaries

- ▶ Describe the degree of land invasion of indigenous land by colonists.
- ▶ What steps, if any, are taken to protect the boundaries of indigenous peoples, land?
- ▶ What is the legal status of indigenous peoples land?
- ▶ What is the form of land property? Community rights, open access, individual, hierarchical?
- ▶ What formal and informal methods are used to control land use?

Economic Development Projects

- ▶ What role do development projects play with indigenous peoples and their land? Describe.
- ▶ What role do indigenous groups have in determining the activities which affect them?

- ▶ Have land use capability categories been used to establish protected or reserved area boundaries? Do they determine the location of public projects? Do they determine the eligibility for loans?

Land Tenure and Colonization: Questions

LAND TENURE AND MARKETS

Property Rights

- ▶ Describe in general the property rights system in the country.
- ▶ Are areas where there is no effective land ownership, that is, open access to the land without the legal or effective ability to control use of the land? Describe these situations.
- ▶ Legally, can an individual or corporation privately own land? What proportion of land (by types) is privately owned?
- ▶ What rights to land does private ownership provide (e.g. exclusion, control over the use of natural resources)
- ▶ Do any other individual or state rights supersede the rights associated with private ownership?
- ▶ Are ownership rights enforceable in reality?
- ▶ How is ownership to land legally recognized? (e.g. land titles)
- ▶ Are titles to land clear and legally enforceable? Does the legal system allow for timely resolution of ownership or titling discrepancies? Explain.
- ▶ What specific types of land are owned by the state? (e.g. parks, military reserves, forests, coastlines, indigenous areas) Describe.
- ▶ How is individual use of state land restricted or regulated by the government? (e.g. user fees, exclusion) Are they effective? Explain

- ▶ Are specific types of land owned and managed jointly by groups of individuals? (e.g. communities, resource users, indigenous people)
- ▶ What are the rights of the group with respect to individuals outside the group? Are these rights enforced?
- ▶ What are the rights and responsibilities of members within the group? Are the rights of group members transferable?
- ▶ Describe conflicts between property systems.

Ownership Distribution

- ▶ Is land ownership concentrated within a relatively small proportion of the population? Describe for various land types or agricultural and resource use categories.
- ▶ Is the land owned by the few fully and/or efficiently utilized?
- ▶ How do individuals who do not own nonurban land gain access to land?
- ▶ Apart from formal land reform efforts, do any laws, taxes, policies, or regulations directly or indirectly promote more intensive use or redistribution of land?

Land Markets

- ▶ Can land or rights to land be bought and sold legally? Under what restrictions? What is the procedure for transferring title?
- ▶ Does an active land market exist? If not, why not?
- ▶ Are titles to land required or considered valid for mortgage lending?

- ▶ Are land or rights to land sold informally (illegally)? describe.
- ▶ Does an active land rental market exist (legal or informal)? What are the typical rental conditions? (e.g. term, land use) If not, why not?

Land Banks

- ▶ Are land banks used to redistribute land?
- ▶ Describe the activities of public or private land bank activities. Have they been successful?
- ▶ How much land has been redistributed? What kind of individuals or groups have benefited from the land bank?
- ▶ If land banks have not worked well, what are the reasons?

COLONIZATION AND REFORM

Direct Government Policies

- ▶ Does a formal program exist for redistributing private or governmentowned land?
- ▶ What are the conditions under which privatelyowned land may be expropriated? (e.g. size, use, warnings) are these conditions effectively and fairly enforced?
- ▶ What are the conditions for distributing expropriated or government land to recipients?
- ▶ Is land use considered in the distribution process?

- ▶ What rights and responsibilities does a recipient of land have? Does a recipient receive clear title? When? Must a recipient "improve" the land in some way? Can a recipient legally sell, mortgage or rent the land?
- ▶ Have redistribution programs been effective?

Indirect Government Policies

- ▶ What government policies exist that indirectly promote land colonization? (e.g. development of forest roads, creation of parks whose integrity cannot be maintained, individual rights to be compensated for land "improvement?")

Spontaneous Settlements and Invasions

- ▶ Does the country have a history of spontaneous settlements?
- ▶ How does the government respond to spontaneous settlements on either public or private land? (e.g. expulsion, purchase land from legitimate owners and redistribute, de facto recognition) Give examples.

LAND USE CAPABILITY AND PLANNING

- ▶ Does the country have a land use capability or classification system?
- ▶ Describe the system? Is it effectively implemented?
- ▶ Do planning and zoning regulations exist? Are they enforced?
- ▶ Do land title problems limit the success of classification and zoning activities?

INTERNATIONAL LEGAL INSTRUMENTS

Un Charter

- ▶ Does the country belong to the International Covenant on Civil and Political Rights or the International Covenant on Economic, Social and Cultural Rights?

Prevention and Punishment of the Crime of Genocide

- ▶ Has any indigenous group tried to have a complaint heard under this convention and associated procedures?

Implementation

- ▶ Do indigenous people have the right in national law to self determination?
- ▶ Have indigenous peoples or other groups speaking in their place taken human rights issues to international bodies?

The Organization Of American States Charter

- ▶ Is the country a party to the Oas? Has it ratified the human rights instruments?
- ▶ Have any cases been heard before the Inter-american Commission on Human Rights or the Inter-american Court on Human Rights?

Other Sources Of Policy

- ▶ Is the country a member of the International Labor Organization Convention 107 and 169?

- ▶ How have development organizations such as the World bank deal with indigenous peoples issues?

CHANGING VALUES AND MORAL PERSUASION

Un Working Group On Indigenous Populations

- ▶ Have any complaints been registered with this body? Describe.
- ▶ Has the government supported or facilitated the work of this body?

International Conference Of Ngos, Indigenous Peoples and Land (1981)

- ▶ Was the government or any indigenous peoples participants at this conference? Did this result in changes within the country?

Inter-American Indian Congress

- ▶ Has the government or any indigenous groups been represented at these conferences? Were there any resultant changes?

- ▶ In terms of revenues, does the activity provide a net cost or surplus?
- ▶ How long has the arrangement existed?
- ▶ Is the arrangement considered efficient or inefficient?

FOREST INDUSTRY AND EXPORT POLICIES

- ▶ Are there log export bans, species export bans, or quotas? Describe.
- ▶ Describe the domestic timber and processing industry.
- ▶ Does the administrative structure exist to control over exploitation of the resource or implement bans and quotas?
- ▶ Are government parastatals involved in timber production, marketing, or processing? Describe.
- ▶ Does the government control prices of timber or wood products. Are the controls effective?

Domestic Industry/Resource Protection Policies

- ▶ Does the ban or quota or tax system result in more domestic value-added?
- ▶ Does the government effectively guarantee logs to either their own plants or that of the private sector?
- ▶ How efficient are the domestic logging, marketing, processing, and export operations?
- ▶ Are bans, taxes, and quotas enforceable or does overinvoicing and underinvoicing exist?
- ▶ Do government export policies differentiate between processed and unprocessed products?

- ▶ Is tariff and tax protection provided to domestic processing industries?
- ▶ Do domestic firms get tax credits? How large?

Direct Government Involvement in Forest-Related Industries

- ▶ What is the history of donor activity and involvement in the timber and wood processing industries?
- ▶ Are there cases of donor or government supported "white elephant" timber operations? Have forest cutting permits been issued to keep such operations in business?
- ▶ Are there controls on foreign ownership of any aspects of timber operations?

Price Controls

- ▶ Are there price controls on lumber products? Are they effectively administered?
- ▶ Is there evidence to suggest low-value uses for high-value timber?

Forest Industry Structure

- ▶ Describe the structure of the timber industry (monopoly, few firms, segmented, vertically integrated, etc.).
- ▶ Are there incentives to foster a more integrated management approach? Credit subsidies, fiscal incentives, joint ventures between forest owners and sawmills?
- ▶ Does the industry as a whole invest in long-term operations or operate for shortterm profits?

Certification and Eco-labeling

- ▶ Does the country export logs to countries that use or plan to use certification?
- ▶ Are there local firms or NGOs participating in the certification process?

PRIVATE AND COMMUNITY FOREST MANAGEMENT

Private Forest Management and Tree Tenure

- ▶ Does the government claim de jure ownership of trees? Does the government try to control cutting of trees on private land?
- ▶ What is the regulatory burden of government control of trees on private land? Are the regulations often ignored? By whom?
- ▶ Does the tenure situation affect the incentives for tree owners to manage the forest resource sustainably?

Farm and Community Forest Management

- ▶ Describe community or social forestry activities.
- ▶ Is cost sharing used as an incentive? Describe.
- ▶ Describe credit availability for farmer or community forestry activities?
- ▶ Do tax incentives for forestry activities exist? Are they effective?
- ▶ What services does the government provide to support farmer and community forestry activities?

Nontimber Forest Products

- ▶ Describe the role of nontimber forest products in local communities, exports, and forest or protected areas management plans.
- ▶ Do any policies directly and specifically support or inhibit collection of nontimber forest products?

FUELWOOD AND OTHER BIOMASS

- ▶ Describe the role of fuelwood in meeting the energy needs of the country in both rural and urban areas.
- ▶ Is fuelwood used for industrial purposes? Describe.
- ▶ How efficient is the use/burning of fuelwood?
- ▶ What is the perceived role of fuelwood collection in contributing to deforestation?

Policies Affecting the Demand for Fuelwood

- ▶ Do subsidies exist for alternatives to fuelwood?
- ▶ What form do the subsidies take: credit, price, tax exemptions?
- ▶ Are taxes levied on fuelwood collection from public lands? Are they effective?
- ▶ Are taxes applied to industries using fuelwood to discourage fuelwood use? Describe. Is there evidence of clandestine operations in these cases?
- ▶ Do regulations exist to control or limit fuelwood use? Are they enforceable?

- ▶ Does the government attempt to promote through education alternatives to fuelwood? Are other incentives used? Describe.

Policies Affecting the Supply of Fuelwood

- ▶ Are local communities and individual farmers involved in projects to promote greater production of fuelwood? Describe these programs.
- ▶ Does the government support afforestation? How?
- ▶ Has the government or private sector tried singlepurpose fuelwood plantations? Have they been successful?
- ▶ Are there incentives for plantations supporting industrial uses of fuelwood?
- ▶ Do tree cutting or fuelwood collection bans exist and are they enforceable?

REFORESTATION POLICIES

Fiscal Incentives and Policies

- ▶ Are there fiscal incentives for reforestation? Describe. Tax deductions, tax exemptions, subsidized inputs, deposit fees?
- ▶ Is the tax and therefore the exemption effective? Describe how.
- ▶ Have specific individuals or groups benefited from such incentives? Who benefits from the fiscal incentive?
- ▶ Are there import duty exemptions for reforestation equipment?
- ▶ Do incentives subsidize the conversion of natural forest to monospecies plantations?

204

- ▶ Are there deposit fees for reforestation? Describe. Are they large enough to affect behavior? Is the deposit fee administration within the capabilities of the implementing institution?
- ▶ Is the revenue derived from deposit fees applied solely to reforestation or is it placed in general revenue or used for other nonreforestation activities?

Public Reforestation Projects

- ▶ What reforestation activities have been large government projects on public land vs. community or smallholder projects?
- ▶ Is the government directly involved in reforestation project. Describe. Are these efforts effectively managed?
- ▶ Are incentives for sustained resource management included in the projects?
- ▶ Do reforestation activities account for local community input or incentives?
- ▶ What percentage of reforestation results in establishment of plantations vs. natural forest management?
- ▶ Describe the approach to reforestation. Does it encourage restoration of degraded areas, enrichment planting of primary species, or establishment of plantations?

Forest: Questions

- ▶ Describe the forestland in the country. What is the distribution of ownership between public, private, and communal tenure systems?
- ▶ Describe the timber industry. Are there many or only a few firms in logging, transportation, processing, and marketing?
- ▶ What agencies are responsible for timber management? Describe their roles and limitations.
- ▶ What is the market (demand and supply) for timber and nontimber forest products?

CONCESSIONS AND LICENSES FOR THE USE OF PUBLIC TIMBER

Duration of Timber Concessions

- ▶ What is the length of the timber concession?
- ▶ Is the tenure of the concession secure?
- ▶ Can the concession be easily revoked?

Conditions and Restrictions on Timber Concessions

- ▶ What conditions and restrictions apply to timber concessions:
 - Management plan required?
 - Annual harvest permitted?
 - Prescribed or proscribed harvest methods, species, and/or cutting restrictions?
- ▶ Are the requirements enforced?

- ▶ Does the implementing agency have the technical expertise and capacity to monitor selective cutting practices to ensure that incidental damage is minimized?
- ▶ Are time limits for cutting included in the concession requirements?
- ▶ Do such time limits result in earlier cutting than economic conditions would otherwise indicate?
- ▶ If limits or bans on cutting endangered timber species exist, are they effective? Do they reduce the incentive to manage the timber stand or encourage conversion to other uses because the timber has little value?
- ▶ Are environmental concerns addressed in the timber concession requirements or management plans? How?

Award Process for Timber Concessions

- ▶ Is the concession awarded competitively or administratively?
- ▶ Does the award system encourage a rush to get the best sites before others?
- ▶ Is award of the concessions an open or closed process?
- ▶ Would the industrial structure, such as an oligopoly, attenuate a competitive bidding process?

Concession Size

- ▶ Are there any size limits on concessions?
- ▶ Is there evidence that concessions are too large and either difficult to manage or protect?

FOREST REVENUE SYSTEMS

- ▶ Describe the forest charge system. What are the royalties, stumpage fees, etc.?
- ▶ Do forest charges contribute significant sums to government revenue?
- ▶ Do forest charges sum up to significant amounts for forest users or concession holders?
- ▶ Describe the timber supply by type of product and whether the source is on public or private land?
- ▶ Describe timber and wood product demand, domestically and internationally by product.
- ▶ Do any forest charges affect user behavior? For example, cut faster, slower, high grade, etc.?
- ▶ Does historic price information exist on any segment of the forest products market? Describe.
- ▶ What has been the historic pattern of timber charges by type?
- ▶ Describe the annual changes over time of timber area harvested?
- ▶ Do timber charges vary with accessibility?
- ▶ Do timber charges vary by species?
- ▶ Present a cumulative description of the forest charge system and its affect on users and government revenue. If behavior has been empirically observed, note as minicases or case studies.

Charges on Concessions

- ▶ Is there a license fee for the concession? Lump sum or annual? Is the fee set administratively or by competition?

- ▶ How large is the fee?
- ▶ Does the fee generate much government revenue?
- ▶ Is there an annual ground rental? How large is it? How is it set?
- ▶ What revenue is generated?
- ▶ Are there charges based on standing timber volumes? What is the base: annual allowable cut, the inventory volume of timber on the concession, or the assessed value of the concession and timber?
- ▶ What are the charges? How large? How are they set? How are revenues generated?
- ▶ Does the forest management institution have the resources to effectively administer this charge?

Charges on Timber Harvested

- ▶ Is there a per-tree charge? Describe. How large is it? How is it set?
- ▶ Do charges vary by species or diameter?
- ▶ Are there volume-based charges? For example, stumpage fees, royalties, reforestation fees, silvacultural fees, etc.?
- ▶ Do the fees vary by log grade species, distance, or location?
- ▶ How is the fee set? Administratively, valuerelated (ad valorem), formula based, negotiated, open-bid or sealed-bid auctions?
- ▶ Does the fee setting process account for changes in costs, prices, and inflation?
- ▶ Is this a significant fee for concession holders?

- ▶ How much revenue is generated?
- ▶ Is the fee easy or hard to administer? Is it a uniform charge or a variable rate structure?
- ▶ Do the charges reflect stumpage values?
- ▶ Are there charges based on area logged? How large are they? How are they set?
- ▶ How much revenue is generated?

Charges on Forest Products Production

- ▶ Is there a charge on the volume or value of the processed products from forests? Is it per unit or ad valorem? How is it set: administratively, ad valorem, or formula?
- ▶ How much revenue is generated?
- ▶ Do people in the industry think that the charge is significant enough to discourage domestic processing?
- ▶ Are there similar charges on logs?
- ▶ Is there a charge on minor or nontimber forest products? Describe. Is it per-unit or volume based? How is it set? Describe those involved in these activities and how they would be affected by a charge.
- ▶ Are there foreign trade or export charges? Describe. Per-unit or ad valorem? How are they set: administratively, value related, or formula?
- ▶ How much revenue is generated and is this charge an important source of government revenue?
- ▶ How does the export charge affect domestic production?
- ▶ Is the charge effectively administered? Is overinvoicing or underinvoicing common?

010

- ▶ Are there different charges for logs and for processed timber products?

Charges for Services

- ▶ Describe user fees that may exist such as fees for applications, inspections, scaling, grading, port charges, etc.
- ▶ Are these a significant source of revenue? Do the fees cover the actual costs of the service?

Charges on Productive Factors

- ▶ Are there charges on the number of workers, payroll, or equipment?
- ▶ How is the fee structured: annual or initial or administratively set?

Charges on Companies

- ▶ Is there a corporate income tax? Describe. Are there exemptions, investment incentives, etc.?
- ▶ Is the corporate income tax well administered?
- ▶ What is the relative importance of this tax to the firm?
- ▶ Is there a profit-based royalty (resource rent tax)? Describe. How much revenue is generated?

Government Participation in Concessions, Harvesting, and Processing

- ▶ Describe any joint ventures or government parastatals involved in the forest sector.

**Fiscal
Incentives**

- ▶ What fiscal incentives favor livestock operations? (e.g., accelerated depreciation, tax holidays, tax offsets, relative export duty preferences).
- ▶ Are property and land taxes large enough or effectively enforced to affect the intensity of land uses?

**Tenure
Policies**

- ▶ Do expropriation laws favor livestock? Describe.
- ▶ Do colonization activities encourage extensive activities such as livestock by requiring land clearing? Describe.

**Provision of
Public Services**

- ▶ What government services are provided to the livestock sector? Describe.
- ▶ Do grazing fees for public land use exist. Describe. Are the fees collected? Do the fees cover the environmental costs of cattle operations on public lands?

- ▶ Have the welfare and environmental costs of dams been considered before their construction?
- ▶ Has large scale hydroelectric projects encourages large scale agriculture and industry?

**Policies Affecting
the Demand for
Hydroelectric Energy**

- ▶ How is this source of energy priced? Is average cost or marginal cost pricing employed?
- ▶ Are prices subsidized? What groups benefit and what groups are harmed by the subsidy?
- ▶ Are lifeline rates applied?

**Policies Promoting
End Use Efficiency**

- ▶ Are taxes used to control energy consumption?
- ▶ What regulations control hydroelectric utilities?

**Policies Affecting
the Supply of
Hydroelectric Power**

- ▶ Is there an national hydroelectricity development plan?
- ▶ What scale of hydroelectric projects exist? Are small project supported in any way by policies?
- ▶ Do policies support the decentralization of hydroelectricity projects?
- ▶ How do hydroelectric projects relate to watershed management activities? Are hydroelectric dams harmed by poor watershed management?

ALTERNATIVE FUELS

Policies Affecting the Demand for Alternative Fuel Sources

- ▶ Are alternative fuels used? What percent of national or local energy demand are met by alternative fuels?

- ▶ Do subsidized prices for other fuels negatively affect the demand for or use of alternative fuels?

- ▶ Do subsidies or other incentives exist to promote the development of alternative fuel use?

- ▶ Do education programs promote the use of fossil fuels?

- ▶ Is credit available to support the development of alternative fuels?

Policies Affecting the Supply of Alternative Energy Sources

- ▶ Do import tariffs promote or stifle development of alternative energy sources?

- ▶ Is credit available to promote decentralized energy sources?

- ▶ Does the government require that electric utilities purchase energy from alternate energy sources?

- ▶ Does the government support or provide subsidies for the research and development of alternative energy sources?

- ▶ Does a nation energy plan exist? Does it include alternative sources of energy?

220

- ▶ What is the relative cost of these operations? Are the agencies or parastatals efficient?
- ▶ What are the regulations or standards associated with product marketing activities by the government?
- ▶ Are there production quotas? How has this affected producer choices and behavior?

REGULATION OF PESTICIDES

Direct Regulation

- ▶ What regulations exist that restrict pesticide production or importation?
- ▶ What criteria are used to determine acceptability of pesticides? (e.g., cost-benefit analysis, toxicity thresholds, EPA or FAO standards).
- ▶ Does the relevant government agency have the ability to fulfill this mandate? Are these criteria uniformly applied? Are the restrictions effectively enforced?
- ▶ What regulations exist that restrict pesticide marketing? (e.g., registration or monitoring of distributors, storage requirements). Are these restrictions effectively enforced?
- ▶ What regulations exist that promote proper pesticide use? (e.g., labeling requirements, educational programs, safety equipment requirements, sanctions for improper use).
- ▶ Do the restrictions vary by product toxicity? How does the relevant agency actually monitor pesticide use? (e.g., spot checks, respond to contamination threats after the fact). Are the restrictions effectively enforced?

Indirect Regulation

- ▶ Does pesticide production or importation receive special benefits such as low tariffs, tax concessions, etc.?
- ▶ Does the government promote crops or cultivation techniques that rely largely on pesticides?
- ▶ Does the government research and/or promote alternatives to pesticides, such as integrated pest management programs?

Cross-Border Effects

- ▶ Do pesticide regulations differ and/or are they enforced more or less leniently in neighboring countries?
- ▶ Has this difference in policy regulation or enforcement promoted contraband or application of pesticide that is not consistent with local policy?

LIVESTOCK POLICIES

Credit Policies

- ▶ After describing individual policies that favor livestock operations, list the policies and describe what is understood about their cumulative effects.
- ▶ Do livestock operations receive favorable credit preferences? Describe.
- ▶ What proportion of agriculture sector loans go to livestock operations?
- ▶ Describe the size of the operations usually receiving credit?

Agriculture and Livestock: Questions

PRODUCT PRICE CONTROLS

- ▶ Describe if and how the government intervenes in agricultural markets.
- ▶ What is the history of price controls and have there been recent changes?
- ▶ Has there been any analysis of agricultural price levels? If so, summarize.
- ▶ Describe the policy sources of agricultural price distortions? For example, has the government followed an import substitution policy for the industrial sector?
- ▶ Have price controls resulted in stabilization of prices?

Ceiling Prices

- ▶ Do price ceilings exist for any agricultural crops? Describe.
- ▶ Has the price ceiling been effective and enforceable?
- ▶ Is the price ceiling applied at the consumer or producer level?
- ▶ Evaluate the agency responsible for administering the price ceiling? Effectiveness, cost, personnel?

Floor or Support Prices

- ▶ Is there a guaranteed minimum price or support price to producers? Describe.

- ▶ What is the effectiveness and cost of this policy?
- ▶ Who benefits from the policy, large or small producers, etc?
- ▶ Is other infrastructure in place to facilitate a broad-based participation in the program? Transportation, for example.

Price Bands and Other Policies

- ▶ Is there a combination of price controls and supports? Describe.
- ▶ Are they effectively administered?
- ▶ Have winners and losers from this policy been identified? Who are they?

INPUT SUBSIDIES AND PRICES

Credit Subsidies

- ▶ Are there credit subsidies for specific inputs, the growing of specific crops, acquiring specific assets, or land clearing or irrigation activities?
- ▶ Are there interest rate ceilings?
- ▶ What is the financial condition of the institutions implementing the credit subsidies?
- ▶ Who are the primary beneficiaries of the credit? What is the default rate and who are the major defaulters?
- ▶ If not rationed by price, how is credit rationed?
- ▶ How long have subsidies been in effect?

Energy: Questions

FOSSIL FUELS

- ▶ What percent of energy demand is met by fossil fuels?
- ▶ How does this relate to industrial growth and expansion of urban areas?
- ▶ What percent of foreign exchange is used to pay for fossil fuels?

Policies Affecting the Demand for Fossil Fuels

- ▶ What are the pricing approaches to fossil fuels? Are they subsidized?
- ▶ Are price controls, average cost pricing, and producer subsidies used on fossil fuels?
- ▶ Who are the primary beneficiaries of the pricing system?
- ▶ Is marginal cost pricing applied to fossil fuels? Given examples.
- ▶ Does the government subsidize fossil fuel consumption? Are the subsidies targeted to particular groups?
- ▶ What has been the rate of increase in the demand for fossil fuels by type?
- ▶ Does revenue for fossil fuels recover all or part of the cost to the utility?

Policies Promoting End Use Efficiency

- ▶ Do regulations and codes impose efficient standards on household electrical products? Do building codes require

efficient energy use? Are industries required to refit their technology to be more efficient?

- ▶ Is fossil fuel consumption taxed? Describe.
- ▶ Are regulations used to control fossil fuel consumption? Describe.
- ▶ Do energy substitution policies increase the demand or reduce the demand for fossil fuels?
- ▶ Do policies exist to promote substitution away from fossil fuels?
- ▶ Do education programs exist to promote more efficient use of fossil fuels?
- ▶ How do environmental policies affect the choice of and efficiency of fossil fuels and other fuels?

Policies Affecting the Supply of Fossil Fuels

- ▶ Does the country have an energy supply strategy?
- ▶ What are the investments in various forms of energy?
- ▶ What are the recent investments in new plant development?
- ▶ Are there tax breaks for using new technology?
- ▶ Are there incentives for small, decentralized fossil fuel plants?
- ▶ What fossil fuel exploration policies exist?

HYDROELECTRIC ENERGY

- ▶ What percent of energy needs are met from hydroelectricity?
- ▶ What are the dam sizes in the hydroelectric system?

- ▶ Are important sources of effluent exempt from paying effluent charges?
- ▶ Are charges imposed only when established standards are exceeded (i.e. fines)?
- ▶ Does the collecting agency have the capacity to effectively impose and collect charges?
- ▶ How are the amounts to be charged determined? Are the amounts changed regularly to reflect changing water quality?
- ▶ Are the changes intended only as a means of government revenue or to change behavior?
- ▶ Assuming that the charges are collected effectively, are the charges set high enough to motivate sources of effluent to reduce the level of discharge? If so, is the reduction sufficient to meet desired water quality standards/
- ▶ Do the charges provide a significant source of revenue to the government? Is the revenue available to the collecting agency or is it turned over to the government's central budgeting agency?

Subsidies and Tax Exemptions

- ▶ Does the government provide subsidies or tax exemptions to encourage adoption of technology that reduces the impact of effluent discharge on water quality? Describe the subsidy or tax exemption and the conditions for receiving the benefit.
- ▶ Are the conditions for receiving the benefit sufficient to require adoption of technologies that are effective?
- ▶ Do the conditions for receiving the subsidy include incentives to minimize pollution control cost or does the subsidy essentially encourage adoption of high cost technology or excess capacity?

- ▶ Are these subsidies or tax exemptions uniformly available to all important sources of effluent? Have important sources of effluent not responded not been improved because the benefits are not significant in relation to the costs or conditions? Do the conditions for receiving the benefit favor some sources of effluent over others? Are important sources of effluent less likely to respond than other sources for any other reasons?
- ▶ Could the subsidies or tax exemptions have the perverse effect of increasing the absolute level of effluent by allowing expansion of the industry receiving the benefits?
- ▶ Are expectations of greater subsidies or tax exemptions in the future encouraging sources to delay adoption of pollution reducing technologies?
- ▶ Does the adoption of these technologies create other environmental problems?

AIR QUALITY

- ▶ What are the most important sources of air pollution?

Direct Regulation

- ▶ If regulations exist that restrict emission of pollutants into the air from stationary sources:
 - ▶ Are important stationary sources exempt from the restrictions?
 - ▶ Do the regulations prohibit specific polluting practices, require specific pollution reduction technologies, specify standards for emission components and/or limit the overall quantity of emissions? Describe.
 - ▶ Are the standards uniformly set for the entire nation, by region, by industry, or are the standards customized for each source? Can firms use the average emission level of several

sources (facilities) to comply with standards? Are existing sources treated more leniently than new sources?

- ▶ Are the standards intended to achieve a desired level of air quality or to reflect the level of emissions achievable from a chosen level of technology?
- ▶ Assuming full compliance, are the standards sufficient to achieve a desired level of air quality?
- ▶ Does the monitoring agency have the capability and motivation to effectively enforce the restrictions? Are penalties sufficient to deter noncompliance?
- ▶ Does compliance create other environmental problems?
- ▶ If regulations exist that restrict emission of pollutants into the air from mobile sources (i.e. automobiles, airplanes, trains, etc.):
- ▶ Do the regulations restrict use of the mobile sources, require specific pollution-reduction technologies and/or establish emission level standards? Describe.
- ▶ Are the regulations uniformly set for the entire nation or do they vary by region or urban area? Are some users exempt from the regulations (de jure or de facto)?
- ▶ Are regulations that require specific technologies monitored at the producer or consumer level or both? (e.g. car manufacturer or car driver) Can a firm use averaging of several products to meet technology or emission standards?
- ▶ Assuming full compliance, are the regulations sufficient to achieve a desired level of air quality?
- ▶ Does the monitoring agency have the capability and motivation to effectively enforce the restrictions and impose penalties? Are the penalties sufficient to deter noncompliance?

Emission Charges and Environmental Taxes/Tax Differentials

- ▶ If charges are imposed on emission of air pollutants:
- ▶ what sources of air pollution are required to pay the charge? Are important sources of air pollution exempt from the charges? Do the charges vary by sector? Do the charges vary by source?
- ▶ Does the collecting agency have the capability to effectively monitor emissions and collect appropriate charges?
- ▶ If taxes are imposed on the use or sale of polluting products or technologies:
- ▶ Do the taxes differentiate on the basis of environmental impact (i.e. Are higher taxes imposed for products or technologies that generate more pollutants)?
- ▶ Does the collecting agency have the capacity to effectively monitor use or sale of products or technologies, and collect the appropriate tax?
- ▶ Assuming full compliance, are the taxes sufficient to discourage the use of polluting products and technologies and/or to encourage the purchase and use of cleaner alternatives? Are the taxes intended primarily as a source of government revenue?

Other Economic Instruments

- ▶ Is emission of air pollutants regulated through quantity-based emissions permits?

- ▶ Are emission permits legally transferable? Is there an active market for emission permits?
- ▶ Do permits allow an increase in the emissions from one source as long as it is offset by a decrease in the emissions from another source?
- ▶ Can firms earn credits for controlling emissions more than is called for under required limits?
- ▶ How is the level of total allowable emissions determined?

LAND DISPOSAL

- ▶ What environmental problems exist as a result of disposal of waste on land?
- ▶ Are land disposal facilities operated by private firms or public agencies?
- ▶ How are hazardous wastes disposed of?
- ▶ Does the government have an integrated industrial/land disposal policy?

Direct Regulation

- ▶ Is importation of waste products restricted? Describe. Are these policies implemented effectively?
- ▶ How is disposal of hazardous waste on land regulated? Is a permit required for facilities that handle or manage hazardous wastes? Do the permits include explicit technical requirements for the design and operation of the facilities?
- ▶ Are the relevant government agencies capable of designing appropriate technical requirements, monitoring compliance with regulations and imposing penalties?

- ▶ At what point is compliance monitored? Does the government attempt to track hazardous wastes from cradle to grave?
- ▶ Do penalties include cleanup costs and/or punitive damages? Are penalties sufficient to deter noncompliance? Is the producer of hazardous wastes ultimately responsible for proper disposal?
- ▶ Do disposal policies conflict with industrial policy? Is the net effect of government policy to promote or discourage the use of hazardous materials?
- ▶ Is disposal of municipal solid waste the responsibility of local governments? Is management of municipal solid waste facilities regulated by national policies? How is compliance monitored?
- ▶ Do government policies require or encourage recycling of reusable materials?
- ▶ Describe the government policy for handling contaminated waste sites. Does the government have the technical and financial capability to clean up hazardous waste sites?

Economic Instruments

- ▶ Are hazardous waste facilities required to demonstrate financial capability to handle any future liability resulting from the operation of a hazardous waste facility?
- ▶ Are privately-owned hazardous waste facilities required to pay licensing or operations fees to the government? Does the amount of the fee vary with the degree of hazard and the amount of waste handled? Are the fees passed on the producer of the hazardous waste and are they high enough to provide incentive for the producer to reduce the level of hazardous waste?
- ▶ Are taxes applied to products that generate hazardous waste byproducts during manufacturing? Is the amount of the tax

sufficient to discourage demand for the product and hence, production of the byproduct? Is the tax intended and/or used to handle existing hazardous waste problems?

- ▶ Is liability for cleaning up contamination from hazardous wastes (and/or punitive damages) explicitly addressed in government regulations? Is the government able to enforce this liability?

- ▶ Are financial instruments used to encourage the recycling of reusable waste products (e.g. bottle deposits)?

Environment: Questions

PROTECTION OF ENVIRONMENTAL QUALITY

- ▶ What are the levels of waste generation of different types? In what cases do they exceed the carrying capacity of the environment? What are the regional variations?
- ▶ What national or local legislation and regulations address pollution? Are these effective in controlling wastes?
- ▶ Is pollution taxed? Describe.
- ▶ Are there efforts to mitigate pollution once it gets into the environment?
- ▶ What is the net effect of environmental protection on jobs and the economy? What are the industry and regional variations?
- ▶ Do environmental regulations affect the cost of production? How?
- ▶ Is there evidence that lax environmental regulations result in industries relocating to the country?

WATER QUALITY

- ▶ What water quality problems exist and what are the main sources?

Direct Regulation

- ▶ If regulations exist that restrict the discharge of effluent into bodies of water:
- ▶ Are these regulations targeted at specific point sources?

- ▶ Are important sources of effluent not targeted by regulations?
- ▶ What are the discharge standards? Do the regulations restrict the volume or content of the effluent or both?
- ▶ Are the standards intended to reflect the level of emissions produced by a chosen "best available" pollution control technology (technology-based approach), are they intended to achieve a desired level of quality in the receiving water body (ambient standard approach) or are they based on standards in industrialized countries?
- ▶ For a technology-based approach, are the standards sufficient to achieve the desired level of water quality?
- ▶ Are government authorities capable of monitoring point source compliance with discharge standards and imposing penalties for noncompliance? Are penalties sufficient to deter noncompliance?
- ▶ For an ambient standard approach, if the ambient standards are exceeded, are government authorities capable of identifying the responsible sources?
- ▶ Are the discharge standards uniform for all targeted sources of effluent or customized for the discharger's circumstances?
- ▶ Do efforts to meet discharge standards create other environmental problems?

Effluent Charges

- ▶ If charges are imposed on the discharge of effluent into bodies of water:
- ▶ Are the charges imposed uniformly or targeted to specific sources?

235

PRIVATIZATION

- ▶ How many state-owned enterprises exist? How many have been or are possibly going to be privatized?
- ▶ Is there any evidence of better resource use or less pollution resulting from privatization?
- ▶ What have been the welfare effects of privatization?

Privatization of State-Owned Enterprises (SOEs)

- ▶ How much do government firms contribute to pollution compared to private firms?
- ▶ Has privatization resulted in large tracts of land being idle?

Re-regulation

- ▶ Are natural monopolies being privatized? Are regulations in place to control pricing and pollution?

Privatization of Natural Resources

- ▶ Are mining, oil, and agricultural enterprises being privatized? Describe the process. Who wins and who loses from the transaction?
- ▶ Has privatization of energy and water resulted in more efficient use of these resources?

FOREIGN DIRECT INVESTMENT

- ▶ How much direct foreign investment has the country been receiving?
- ▶ What has been the investment climate in the past and currently?
- ▶ Has deregulation resulted in more foreign investment?

Special Incentives

- ▶ Are special incentives provided for direct foreign investment? Give examples?
- ▶ Are investors given tax holidays, reduced tax rates, or input subsidies?
- ▶ Are investors asked to address the environmental consequences of their activities?

Foreign Exploitation of Natural Resources

- ▶ Are foreign firms involved in primary resource exploitation of forest, mines, and agriculture?
- ▶ How are these firms involved? Concession? Ownership? Partnership?
- ▶ Is the awarding of concession to foreign firms transparent?
- ▶ Are environmental effects addressed in the concessions?
- ▶ Do institutions have the ability to regulate the environmental activities of foreign firms?

Technology Transfer and Human Capital Development

- ▶ Do policies encourage maximum training of the local work force?
- ▶ Are management skills transferred to the local work force?

Pollution Havens

- ▶ Does the country serve as a pollution haven because of lax environmental standards?
- ▶ Describe the types of industries locating in the country.

Trade and Investment: Questions

EXPORT PROMOTION

Tariff Policies

- ▶ Describe the tariff structure for industrial and agricultural goods. Do they differ?
- ▶ Does the government practice import substitution policies? Has this affected the competitiveness of the country's products?
- ▶ Are some exports subsidized? Is the purpose of the subsidy to get foreign exchange?
- ▶ Have tariff policies resulted in capital-intensive production?
- ▶ Has the tariff system hurt employment in rural areas?
- ▶ Is there any shift toward trade liberalization? Describe.
- ▶ Is trade liberalization resulting in increased pressure on the natural resource base?
- ▶ Are safeguards in place to protect over-exploitation of resources? Are the institutions responsible for the safeguards capable of implementing them?

Trade-Generated Economic Growth

- ▶ What are the environmental costs associated with increased trade?
- ▶ Is there an increase in materials and energy use in the economic system?
- ▶ Has the scale of agricultural production changes? Describe.
- ▶ Has more efficient technology been adopted as a result of trade reform?

Export Promotion Policies

- ▶ Have nontraditional exports been promoted? How has this affected their production?
- ▶ Who have been the beneficiaries of these policies?
- ▶ How have these export crops affected the environment?
- ▶ Has subsidized credit, tax relief, or technical assistance been given for the expansion of nontraditional export crops?
- ▶ What export duties apply to nontraditional export crops? Do other crops pay higher duties?
- ▶ Have special trade relationships been promoted? Describe.

Trade Liberalization

- ▶ What groups have lost and what groups have benefited from trade liberalization?
- ▶ What import quotas have been reduced? Have import permit requirements been abolished? Have tariffs been reduced?
- ▶ Has a structural adjustment loan required trade reform?
- ▶ What has the aggregate effect of the structural adjustment loan been on the environment?
- ▶ What has been the country's position on GATT?
- ▶ Will poor environmental regulations result in undesired economic activities?
- ▶ How will NAFTA or possible inclusion in NAFTA affect growth, welfare, and conservation goals?

- ▶ Do the credit institutions have autonomy?
- ▶ What is the role of the private financial sector?
- ▶ What are the collateral requirements? Are they biased in favor or against any group?
- ▶ Has subsidized credit resulted in increased use of chemical inputs?
- ▶ Are domestic or export crops favored by credit policies?

EXCHANGE RATE POLICIES

Overvalued Exchange Rate

- ▶ What has the exchange policy been in the country? Have there been any recent changes?
- ▶ Has the exchange rate policy favored imports or exports or otherwise affected the competitiveness of domestic products? Has the policy changed in recent years? Describe the recent history of the policy.
- ▶ Have prices been or are they now skewed against rural or agricultural production? Has employment in these sectors been hurt by exchange rate policies?

Floating Exchange Rates

- ▶ Floating the exchange rate can result in changed resource pricing and use. Have these been observed?
- ▶ Has a change in exchange rate policy increased pressure on resources because of other policy problems?

FISCAL MANAGEMENT

Fiscal Deficits

- ▶ Describe the fiscal situation of the government.
- ▶ What is the role of current expenditures and capital expenditures?
- ▶ What is the debt situation of the country?
- ▶ How has the inflation rate affected the deficit?
- ▶ How does the allocation of public expenditures affect longterm resource management?
- ▶ How does the deficit affect the private sector and the rate of investment or credit availability?
- ▶ What is the role of external sources of funding?

Taxes and Revenue Sources

- ▶ What kind of tax base does the country have?
- ▶ What kind of fees are collected from the sale of governmentowned resources such as timber?
- ▶ Who wins and who loses from the present tax system: income tax, corporate tax, user fees, etc.?

Debt Financing

- ▶ If the debt is financed with domestic credit, what is the rate of inflation?
- ▶ Does the domestic debt financing eliminate the use of funds for other investments, such as longterm infrastructure activities?

- ▶ How has external financing affected the balance of payments? Describe.
- ▶ How has public debt affected development programs?
- ▶ Has the size of the public debt reduced the overall level of investment?

Debt-For-Nature Swaps

- ▶ Have debt swaps been used in the country?
- ▶ What type of debt swaps have been used: debtequity, debtnature, debt?
- ▶ In debtnature swaps who have been the beneficiaries? Describe the effectiveness of these programs.

STRUCTURAL ADJUSTMENT LENDING

- ▶ Has the country received a structural adjustment loan (SAL)?
- ▶ What were the conditions of the loan? Were the conditions met? Describe.
- ▶ What were the environmental effects of the various elements of the SAL? Were any of the effects irreversible?
- ▶ Were there long-term economic, welfare, and conservation benefits to the SAL? Describe.

Macroeconomic Policies: Questions

- ▶ Describe the overall macroeconomic situation. What is the gross domestic product (GDP)? What is the employment level?
- ▶ Provide a description of the economy.
- ▶ Provide a brief history of recent macroeconomic policy.

NATURAL CAPITAL AND THE ECONOMY

- ▶ Is there any effort by the macroeconomic policymaking bodies of the government to account for the effects of economic growth on natural resources and the environment? Describe.
- ▶ Has the country adopted the UN satellite accounts for natural resource and environmental accounting?
- ▶ Does the government environmental agency or advisory body have input into macroeconomic policymaking? Describe.

ECONOMIC EVALUATION OF ENVIRONMENTAL RESOURCES

- ▶ Are environmental impact assessments required for public or private projects?
- ▶ Does any government unit require estimation of environmental values associated with resource use or policy decisions?
- ▶ Do government agencies, universities, or consultants provide environmental valuation services?
- ▶ Is there evidence that valuation estimates have been used in public decisions related to service or infrastructure provision? How does the government, for example, deal with the environmental effects in a cost-benefit analysis for a hydroelectric plant?

- ▶ What discount rate does the government require before it funds a project? How has this affect investment decisions? What has the environmental effect of these projects been?

MONETARY AND CREDIT POLICIES

Monetary Policies

- ▶ Describe the country's monetary policy? Is monetary policy expansionary?
- ▶ What has been the trend in the country's inflation rate?
- ▶ What are the nominal and real interest rates?
- ▶ Does monetary policy discourage longterm investment?
- ▶ Is monetary policy contractionary or has it been so in the recent past?
- ▶ Is the economy stagnant, is unemployment high, and is poverty increasing?
- ▶ What has been the trend in per capita consumption, unemployment, and underemployment?
- ▶ Is there a connection between the aforementioned problems and the rate of resource use? Describe.

Credit Policies

- ▶ Does the government control interest rates? How? Maximum lending or deposit rates? Internal or external lines of financing? Subsidized credit? Favorable reserve requirements for agriculture or livestock operations?
- ▶ Describe the sources of credit available in resource sectors such as agriculture and forestry. What groups benefit or lose from this system?

- ▶ Has the government explicitly or implicitly promoted redistribution of population? Describe.

The Demographic Transition Model

- ▶ What are the important demographic issues in the country?
- ▶ What statistical data exist to refute the demographic transition model at the national and local levels?

REDISTRIBUTING POPULATION

- ▶ Has rapid population growth resulted in localized resource destruction? Give examples?

Internal Redistribution

- ▶ Are there formal and informal colonization programs? Describe. What are the major institutions involved?
- ▶ How has population growth changed in the sending areas?
- ▶ What is the per capita income of the colonists?
- ▶ What is the per capita amount spent by government and donor projects to promote sustainable development?

External Redistribution

- ▶ What percentage of the population emigrates from the country and from the sending areas?
- ▶ What is the average remittance sent by each emigre?
- ▶ Is there any difference in fertility rates from high sending areas compared to other areas/

GENDER DISCRIMINATION

- ▶ What is the percentage of poor households headed by women?
- ▶ What is the average number of hours women work compared to men in a given community?

**Reducing Gender
Bias in Policies
and Programs**

- ▶ When the family depends more on wage income, what percentage of that income does the woman control?

- ▶ What is the average level of education for women compared to men?
- ▶ What is the mortality and morbidity rate for women compared to men?
- ▶ Can women own land and do they have access to credit?

246

Population: Questions

POLICIES TO SLOW POPULATION GROWTH

Population Growth Issues

- ▶ What is the rate of population growth in the country as regionally within the country?
- ▶ What are the standard welfare measurements? (Per capita income; percentage of the population below the poverty level; mortality and morbidity rates by gender, ethnicity, and locality; percentage of couples using birth control).
- ▶ What is the demand for family planning methods and information compared to supply?
- ▶ What is the relationship between population density and resource degradation?
- ▶ What is the per capita public investment in infrastructure?

Beliefs and Assumptions

- ▶ What are the central beliefs and assumptions about economic behavior that appear to drive existing population policy?
- ▶ Are those assumptions verified by local case studies and specific field data?
- ▶ Are those assumptions grounded in statistical studies?

Fertility Regulation

- ▶ How are fertility regulation and family planning services delivered?
- ▶ What is the ratio of public to private per capita expenditures?

- ▶ What percentage of total development spending by government and donors is dedicated to family planning?
- ▶ Are there any explicit government policies dealing with population? Describe.
- ▶ Are there explicit population growth targets?
- ▶ Does the government implement or support these policy objectives?
- ▶ Does the government provide or support family planning services?
- ▶ Is there an national population council?
- ▶ Are there programs to increase the status of women?
- ▶ Are they effectively implemented?
- ▶ What is the education level of the female population?
- ▶ Do policies specify the role of men in family planning?
- ▶ Do educational efforts support these policies?
- ▶ Is mass media used to promote family planning and change attitudes on appropriate family size?
- ▶ Are there any direct incentives provided to improve family planning or reduce family size? Describe.
- ▶ What is the role of the private and public sector in fertility regulation and family planning services?
- ▶ Do barriers to family planning and child spacing exist in medical codes of ethics, labor and tax codes, civil and family codes? Is legal reform of these areas of legislation in progress?
- ▶ How are services financed? Are they subsidized?
- ▶ Are cash incentives used for contraceptives or to delay or limit childbearing?
- ▶ Are there entitlement related to child rearing?
- ▶ Are there disincentives to number of children? Describe.

see

Inventory Guiding Questions

Population
Macroeconomic Policies
Trade and Investment
Environment
Energy
Agriculture and Livestock
Forest
Land Tenure and Colonization
Indigenous Peoples
Protected Areas and Wildlife
Water and Watershed Management
Coastal Zone Management

Green Book Model Policy Project

Key Project Activities	1
Policy Inventory and Agenda	5
Problem Identification	5
Policy Identification	6
Institution and Stakeholder Identification	6
Policy Assessment	7
Policy Alternatives and Research Priorities	8
Policy Information and Analysis System	15
Policy Implementation and Education Activities	19

253

Green Book Model Policy Project

Key Project Activities	1
Policy Inventory and Agenda	5
Problem Identification	5
Policy Identification	6
Institution and Stakeholder Identification	6
Policy Assessment	7
Policy Alternatives and Research Priorities	8
Policy Information and Analysis System	15
Policy Implementation and Education Activities	19

258

Green Book Model Policy Project

The Green Book model policy project presents a conceptual model for creating a natural resource and environmental policy project building upon and incorporating other sections of the Green Book. For example, the initial component of the model policy project uses the policy inventory methodology presented in the previous section. In addition, the Green Book workshop presented in the first section of volume 2 is incorporated in the inventory and in subsequent activities in the model policy project.

The concepts in this section present a generalized approach to a Green Book structured policy project. Situations will vary from country to country, requiring modification of the structure. Nevertheless, this structure provides the base from which policy project design can be developed.

This section suggests how to use the Green Book to initiate and structure a set of policy analysis activities at national, regional, and local levels. The Green Book can be used as the base document and organizing structure for initial assessment (policy inventory), on-going research design and analysis, policy and institutional reform, and as a source of indicators. Because the Green Book is an easily understood rendition of the state-of-the-art in resource policy analysis, in-country training in policy analysis begins when the Green Book is first opened. It will then be adjusted and augmented to the country context.

KEY PROJECT ACTIVITIES

There are three primary components to the Green Book approach to policy analysis: 1) a natural resource policy inventory, 2) a policy information and analysis system and (simultaneously), 3) policy implementation and education activities. Each of the three project components incorporates five central design activities:

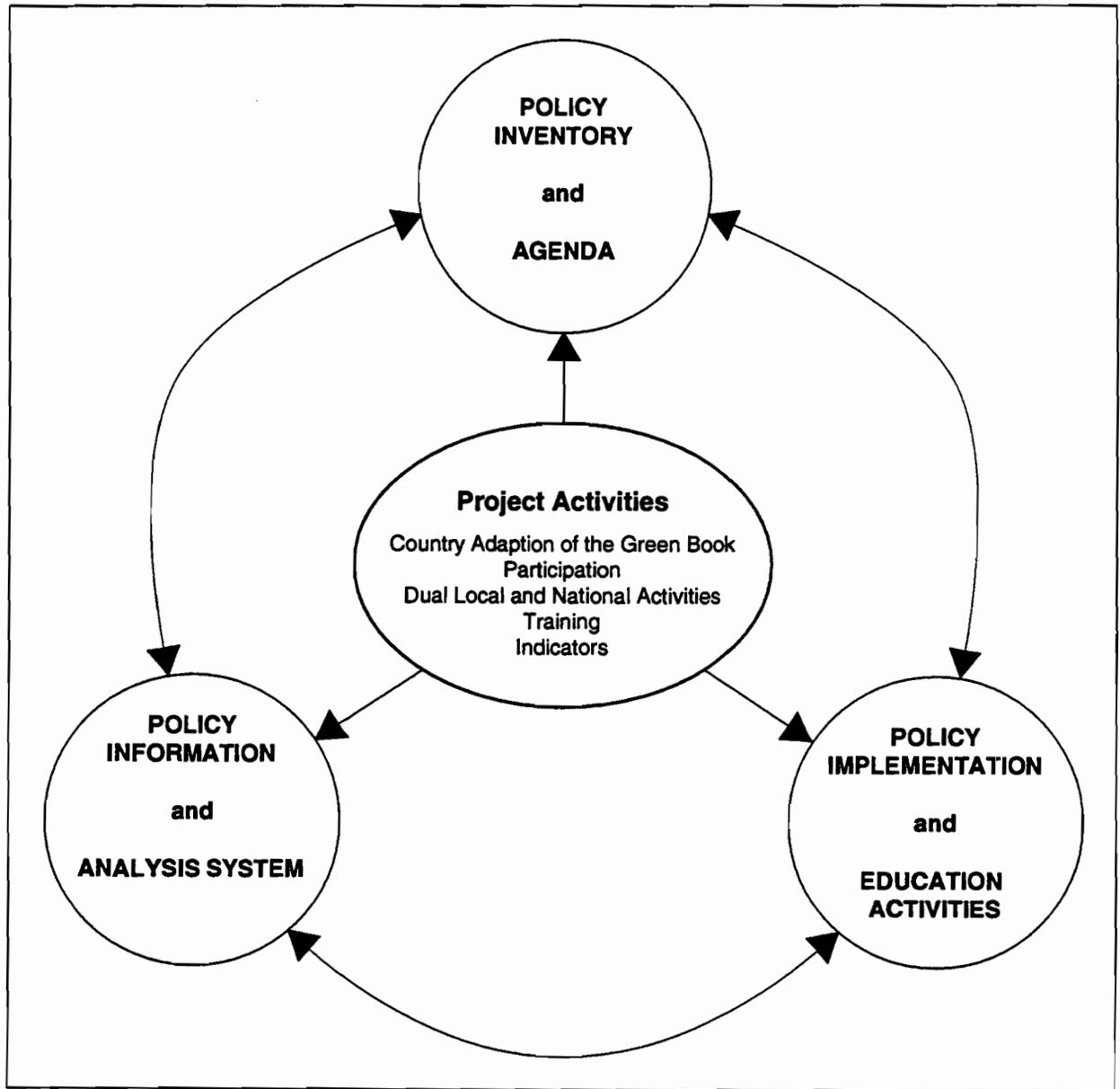
- Adaptation of the Green Book to the country context. The Green Book provides a systematic way to identify problems, create a country-based inventory of policies, assess the impacts of various policy alternatives, and create a research and policy reform agenda. Each of the project activities produces a customized document that will replace the Green Book and produce a document that is precisely tailored to the needs of the country.

- Participation of host nationals in all inventory, analysis, and implementation activities. The project is structured to use a participatory approach to build interest and support, define the agenda, and increase institutional capacity throughout the three activities. A core inventory team, augmented by satellite teams of representatives from public and private institutions as well as stakeholders at the national and community levels will identify natural resource problems, create the country policy inventory, and review all project products. In the policy analysis activity this group will be expanded through working groups focused on the more narrowly defined areas of analysis and on specific stakeholders. In the policy implementation phase, the educational tools resulting from the analysis and working group activities will be disseminated to the broader public, increasing the pool of potential participants for future analysis activities, as well as building a demand for the results of analysis.
- Dual interactive focus at local and national levels of the project. All activities (policy inventory and agenda, policy analysis, and policy implementation) have a dual focus, that is at the national and the local levels. The policy inventory will include policy-oriented participatory rural appraisals; the institutional mapping will address similar issues at the national and community levels. Empirical observations about policy effects at the community level will reinforce the policy learning process and suggest how local communities and government can better interact for improved resource management.
- Training of host country professionals. Specific policy research and analysis will be addressed by providing on-the-job training and support for host country professionals in a particular policy area. Such a relationship is mutually beneficial because the external expertise has theoretical and subject matter experience while the country participants know the local context and how theory and experience from other contexts are confounded in the local situation. Short- and long-term overseas training needs will be identified by examining institutional capabilities during the policy inventory. In addition, as the Green Book is refined into the country context, areas of training needs will be identified. This broad-based and iterative process is built into the three project components.

- Monitoring and evaluation indicators identified and tracked for all activities. Monitoring and evaluation will be incorporated from the outset and it will have a dual focus. One focus will be on how well the main project activities are being carried out, that is, on the process or conduct of the project. The second focus will be to assess the consequences (intended and unintended) of the project's activities; that is, focusing on the impact of the project. The purpose of monitoring and evaluation is to produce management information to improve project performance. The problem identification activity will develop a country-relevant definition of biophysical and socioeconomic indicators. Associated indicators for measuring improved natural resource practices can be identified and assessed in the policy inventory with input from the local-level activities. Specific indicators for policy and institutional change will be defined within the project as those policies are identified.

Figure 1 summarizes components and activities of a Green Book model policy project.

Figure 1: Green Book Model Policy Project



POLICY INVENTORY AND AGENDA

Problem Identification

The identification of socioeconomic and biophysical problems related to the use of natural resources and the environment establishes in part the scope of the subsequent policy analysis. Identification of problems also provides a framework for organizing the policy assessment and facilitating the steps that follow. Problems might also be organized around resource types (soil, water, trees, etc). It is important to define problems both at the national and local levels and identify to whom and how they are problems. In addition, resource use problems often have a time or intergenerational aspect where current use deprives future use.

Participation at both the national and local level should commence from the outset by having reviews or a draft problem description by participants before information gathering commences. Initial participants will be public and private interested parties as well as stakeholders from the national and community levels. The inventory team will gather information from existing secondary sources as well as from resource users at various levels and provide a draft problem description for participants who will review and initially rank problems. Initial policy groupings can also be established using the Green Book taxonomy and then expanded as participants identify issues that are not included in the Green Book. In effect a matrix is created where columns are the problems, the taxonomy established the rows, and the initial content of the cells is provided by the inventory team and participants in the form of national policies (and institutions). Bio-physical and socioeconomic indicators and the stakeholder groups so affected should be sketched at this point and elaborated and detailed throughout subsequent activities.

The inventory team should consist of the team leader, a core group, and a series of ad hoc satellite groups formed around major problems identified. These satellite groups should be made up of representatives from interested parties at both local and national levels. The inventory team and satellite groups will gather information from existing secondary sources as well as from resource users at various levels and then provide a draft problem description.

Policy Identification

This step identifies de jure and de facto policies and regulations of both public and private institutions at the regional, macroeconomic, sector, sub-sector and community level which affect the natural resource base and problems identified above. The main objective(s) and/or outcomes of the respective policies and regulations will be stated. The analytic structure and questions guiding the inventory are provided by the Green Book. The team should also identify and incorporate national experience and amend or expand the taxonomic structure of the Green Book as appropriate.

Using the taxonomy the team will systematically identify the content of major policies through an examination of secondary sources and interviews with stakeholders in the public and private sector. A series of questions keyed to the analysis of the Green Book will facilitate field activities.

At the same time as policies are being catalogued, the team should develop and implement a policy oriented participatory rural appraisal seeking to understand the on-ground effects of national policies. The team will also need to be aware of the interdependencies between policies at both the national and community levels and describe those interactions through brief case studies.

The results of this cataloging process should be reviewed by participants for accuracy and completeness at both national and local levels. Again, a ranking process on more and less important policies should occur. Tables summarizing key policies by problem area can then be prepared and henceforth serve as a baseline description of the policy situation for a given problem.

Institution and Stakeholder Identification

At the same time as policy identification, the identification of the public and private institutions that make or implement the respective policies and regulations should occur. This description outlines relative roles and responsibilities of relevant government and private sector institutions.

Institutional maps for both policy categories and problem categories can be prepared by appropriate members of the inventory team which describe the institution, its composition, its role, key actors and key stakeholder groups affected by the institution. Moreover, detailed descriptions of the most important institutions should contain historical background, an assessment of the strength or weakness of the institution with respect to its role in resource use issues, and other empirical evidence of relevance likely to arise in the information gathering process.

For example, governmental and parastatal forest operations have been significant and costly elements of forest policies and the background and performance of these may be important enough to describe in detail. Particular attention should be paid to institutional bottlenecks and conflicting mandates. This information can be reviewed at the same time and using the same methods as the policy identification process. Similarly, institutional mapping activities should be implemented at the community level and a comparison made between national and community level situations, as well as across communities.

Policy Assessment

It is necessary to make a preliminary qualitative assessment of the impact of these policies and regulations on each of the natural resources. The assessment should identify and discuss linkages, intentional and unintentional, between policies and institutions identified in steps (2) and (3) and the problems in step (1). The assessment should also identify the important trade-offs between short-term and long-term economic, welfare, and environmental impacts of the current policy regime. The effects of policies or policy changes on different stakeholders should also be addressed.

The Green Book provides a summary analysis that can facilitate initial policy assessment. It will be necessary to adapt and refine the assessment to the country context. It is likely that the current understanding of policy/problem interactions might at best be one of identification of the direction (positive or negative) of the relationship. The team and participants jointly may have to address the magnitude (and hence priority) of the relationship. The institutional maps will help the process of identifying the cumulative effects of a set of policies on the resource base. Clear identification of stakeholders will be needed to make policy analysis and reform priorities transparent.

The inventory team should present this analysis for participant review of content. Particular problem or policy subsets should be reviewed in detail by appropriate working groups of participants. Those groups should reflect national and community level input.

Policy Alternatives and Research Priorities

This step identifies and makes recommendations on (1) the main policy alternatives to be considered; (2) the agenda for policy reform; and (3) the agenda for policy analysis. This requires a ranking of the problem areas in terms of relative importance and identifying which existing policies if changed, or new policies if adopted, would have the greatest impact on the problems identified. The process also involves making trade-offs among multiple objectives.

Stakeholder participation is essential if the analysis is to become an effective agenda for reform or research. Identifying the main policy alternatives and factors affecting possible policy reform is the most important step for stakeholder review. The project will hold workshops for representatives from the various stakeholder groups during which they will use the draft analysis provided by the inventory team to: (1) rank the problem areas in terms of relative importance and (2) identify which policies, existing or proposed, would have the greatest impact on the identified problems.

It is important to note that a policy is any incentive that systematically changes behavior. For example, policy reform to reduce the rate of deforestation can range from broad sweeping reform of agricultural policy that encourages land conversion to very targeted policies within a natural resource ministry to reduce corruption through narrowed ministry focus, improved data management, and/or new management incentives.

This process is presented in a sequential manner only for the purpose of explanation. In real time it should be interactive and iterative, not linear. The problem definition will suggest the policy set. Analysis of the policy set in turn will modify the problem definition. Analysis of institutions and stakeholders should modify the initial vision of both the problem definition and the relevant policy set. The results of the policy research will probably change the problem definition and perhaps the reform agenda and/or modify the institutional and stakeholder analysis. Additionally, the process can be focused narrowly, for example on

problems associated with a particular buffer zone activity, or broadly on the entire array of problems facing a natural resource ministry.

This step completes a process and a product. The process is designed to develop through a participatory structure and joint national and community activities a coherent strategy for policy analysis and country demand for and ownership of policy analysis and reform. The product will be a document composed of five chapters based on the five activities herein described. This document can be disseminated in a loose-leaf notebook form and updated periodically with the results of policy analysis or intermittently as the situation requires. The initial document will provide a format for both keeping people informed and for tracking progress (through baseline indicators). In addition, scopes of work for policy analysis activities will be prepared at the conclusion of the policy inventory process. The activities for each step in the policy inventory and the relationship to chapters in the country Green Book are summarized in the next pages.

Step 1: Problem Identification

Activities	Products
<ul style="list-style-type: none">▶ Establish core team▶ Identify problems▶ Identify biophysical and socioeconomic indicators.▶ Establish satellite teams around problem areas with national and local focus▶ Gather information from existing and secondary sources and from resource users▶ Do a preliminary ranking of problems▶ Participant review of work	<p>Chapter 1: An identification of natural resource problems ranked according to importance provides a general assessment of the natural resource and environmental problems in a country.</p>

265

Step 2: Policy Identification

Activities	Products
<ul style="list-style-type: none"> ▶ Identify working groups ▶ Identify de jure and de facto policies and regulations at macroeconomic, sector, subsector and community level which affect problems identified. Use GB manual as a guideline for gathering information from secondary sources and interviews with stakeholders in public and private sector. ▶ State main objective of policy. ▶ State outcome of policy. ▶ Begin policy oriented rural appraisal to understand the on-ground effects of national policies. ▶ Identify interdependencies between policies at national and community level & develop one or two mini-case studies. ▶ Review results of cataloging process with participants ▶ Prepare tables summarizing key policies by problem area. ▶ Identify preliminary indicators for improved management practices ▶ Amend or expand the policy taxonomy. 	<p>Chapter 2: An inventory of policies that effect these problems and an assessment of the magnitude and time-frame for those impacts. Describes the effects of policies on growth, welfare, and conservation. Includes matrix or matrices of problems and policies.</p>

268

Step 3: Institution and Stakeholder Identification

Activities	Products
<ul style="list-style-type: none"> ▶ Identify public and private institutions that make or implement respective policies and regulations. ▶ Describe roles and responsibilities. ▶ Prepare institutional maps for policy categories and problem categories which describe the institution, its composition, role, key actors, and key stakeholder groups. ▶ For most important institutions describe historical background, assess strengths and weakness with respect to its role. ▶ Identify institutional bottlenecks and conflicting mandates. ▶ Prepare institutional maps at the community level and compare ▶ Review with participants ▶ Identify indicators for improved institutional capabilities ▶ Identify the winners and losers 	<p>Chapter 3: An identification and assessment of major institutions and stakeholders associated with each problem and policy set. Fill out tables for institutions and stakeholder issues.</p>

Step 4: Policy Assessment

Activities	Products
<ul style="list-style-type: none"> ▶ Identify and discuss linkages (intentional and unintentional) between the policies, institutions and problems ▶ Identify important trade-offs between short-term and long term economic, welfare and environmental impacts on stakeholders identified. The Green Book Vol 1 provides a general summary analysis of what is currently known and not known. ▶ Use Green Book treatment as a starting point to adapt and refine it to the country context. In many cases interactions can only be described as positive or negative. ▶ Estimate the magnitude of the impact as a way of beginning to develop priorities for change ▶ Use the institutional maps to help identify cumulative effects of a set of policies on the resource base. ▶ Focus analysis on clearly identified groups of stakeholders at national and local levels to make policy analysis and reform priorities transparent ▶ Present analysis for review ▶ Identify indicators related to assessment of the causal linkages among problems, institutions and policies and the important tradeoffs made in terms of growth, welfare, and conservation (or on any other set of major objectives). 	<p>Chapter 4: Assessment of the causal linkages among problems, institutions and policies and the important tradeoffs made in terms of economic growth, welfare, and conservation (or on any other set of major objectives).</p>

Step 5: Identification of Alternatives and Analysis Priorities

Activities	Products
<ul style="list-style-type: none"> ▶ Again rank problem areas in terms of relative importance ▶ Identify which policies if changed or new policies if adopted would have the greatest impact on the problems identified ▶ Be explicit about the trade-offs being made ▶ Review with participants ▶ Development recommendations on main policy alternatives, reform agenda, and analysis agenda including scopes of work for that analysis. ▶ Identify indicators of policy change ▶ Publish and disseminate the base document as first draft of the Country Green Book 	<p>Chapter 5: Identification of which policies if changed would have the greatest impact on problems ranked according to importance, a policy reform agenda, major research questions and scopes of work for policy analysis to be carried out in subsequent project activities.</p>

269

POLICY INFORMATION AND ANALYSIS SYSTEM

The policy analysis agenda identified in the policy inventory will be implemented after the initial six months of the project with dissemination of the country Green Book. A technical advisory committee composed of appropriate and interested members of the participatory assessment process review scopes of work and analysis results. Participant working groups will be organized for each analysis activity. Each analysis will include baseline indicators delineated in the policy inventory and a strategy for dissemination (workshops, seminars, publications). A summary of the results can be included in periodic (annual) revision of the country Green Book. This can also allow for overall review of priorities because the initial structure of problems and policies can be expected to change over time as more is learned (in part from analysis) and the situation changes. Activities at the national and community levels will have overlapping design or mandates and have team members in common between the two activities.

The range of problem and policy issues suggests that analysis will be performed by a large and diverse set of individuals, expatriate and host national, government and private and NGO. A small core implementation team responsible for management of process and outputs will facilitate the participatory process but farm out actual analysis activities to appropriate entities based on criteria such as cost, institutional interest and capacity, past performance, and so on. Over time analysis activities may primarily be performed by those entities with superior performance. The core team will have a base in both the public and private sectors in order to facilitate participation and ownership by both in the project. While this will make initial implementation more complicated, it provides for a more flexible long term structure.

In its most rudimentary form the Green Book policy information and analysis system is a loose leaf notebook with detailed sections following the general policy categories. The responsibilities for examining various policy categories will be undertaken by different groups within the government, different specified research activities developed in the inventory, and related to different community resource user groups, etc. Instead of building a single research unit which would face sustainability problems after the end of the project, the framework allows for the decentralization of responsibility for policy research areas to those with the interest, skill and responsibility to keep informed about that policy group.

For example, a ministry of agriculture policy analysis component would be asked to keep abreast of changes resulting from changes in agricultural subsidies. Therefore, sections of the loose-leaf notebook will be replaced as more is learned about that area. Similar responsibilities can be assigned throughout the government as well as to NGOs. This system would build analytic expertise in existing units and greatly reduce overall human resource requirements for implementing the Green Book policy project by developing expertise where a base already exists.

Once the inventory results are published, the base notebook is then widely distributed. Subsequent analysis of knowledge will trigger revisions of sections and the responsible group or agency can distribute the revised analysis and the previous version can be replaced. Analysis units with broader mandates can contribute to the analysis by addressing interactions between policy groups as we learn more about those interactions. For example, a ministry of finance can examine important interaction between macroeconomic policy and resource sector policies. An illustrative institutional structure is presented in Figure 2. There are many other potential alternative institutional formulations.

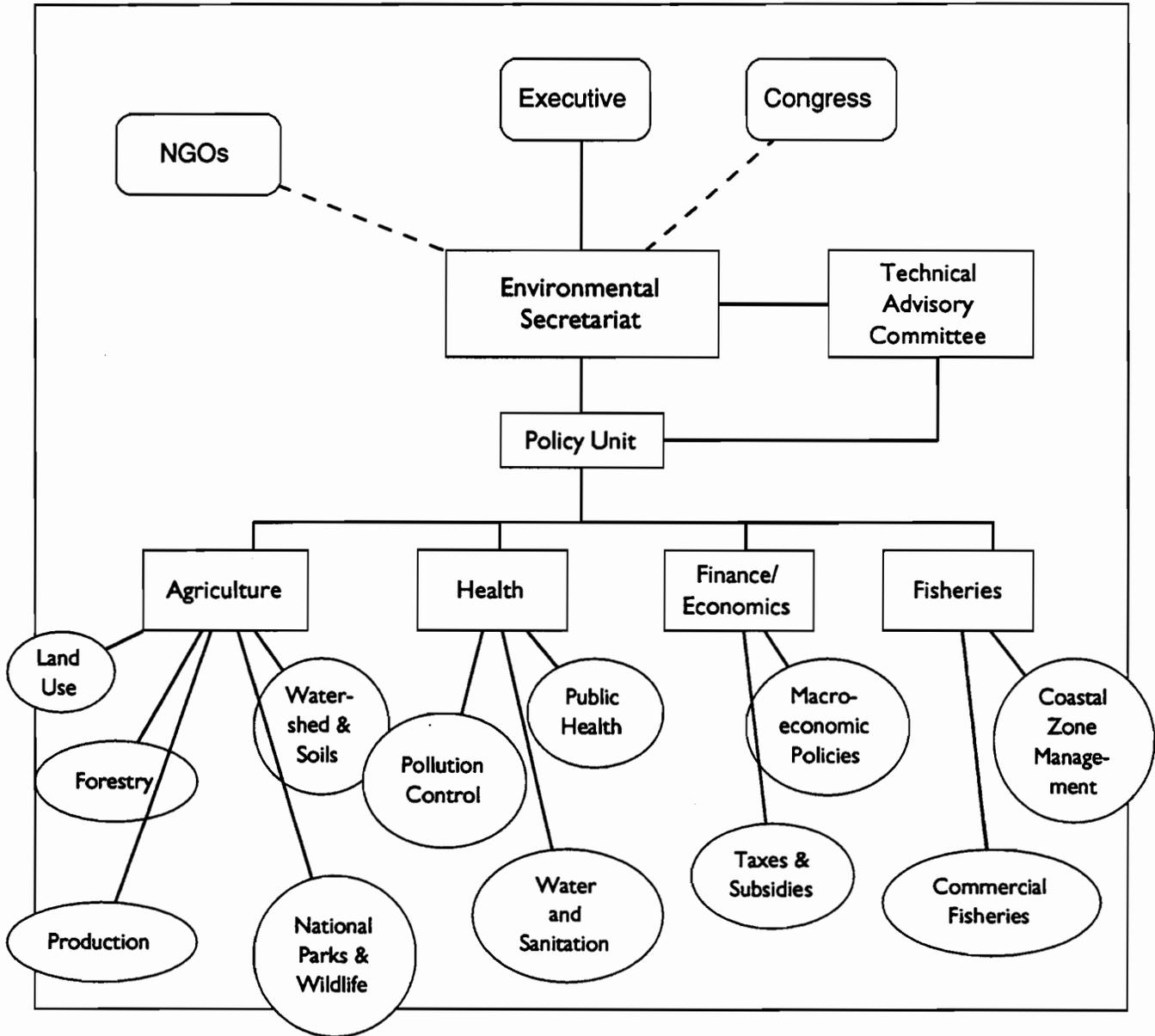
The policy analysis agenda will be implemented within this framework. Long- and short-term technical assistance can support in-country training activities focused on particular policy areas such as livestock or forest policies within the appropriate departments.

The policy oriented participatory rural appraisals will be further developed to continue to expand our understanding of how national policy can be better shaped as a result of understanding the incentives and options open to local resource users. Theoretical assumptions do not account for all of the behavior seen in resource use decisions.

There are number of potential levels of training built into the Green Book framework. On-going participation in specific and then broader policy areas will be addressed by a committee established to oversee the implementation of the Green Book activities and training. Overseas training needs will be identified from a process which examines institutional strengths and training needs in support of the various categories of needed policy expertise identified in the policy inventory. In addition, as the Green Book is refined into the country context, areas of training needs will be identified by the committee. This will be a broad-based and iterative process built into the three training activities.

- Specific policy research and analysis will be addressed by providing on-the-job training and support for those individuals in a particular policy area. Such a relationship is mutually beneficial since the external expertise has theoretical and subject matter experience while the country participants know the local context and how theory and experience from other contexts are confounded in the local situation.
- As the focus of policy discourse broadens and the interdependence between different policies and institutions become more important, workshops and seminars will be held. In this context policy mediation activities can also be held.
- Stakeholders at the national, regional and community levels, while participants throughout the project will be asked to participate in workshops which use the Green Book to provide input into strategic policy reform or problem resolution activities.

Figure 2: Illustrative Institutional Structure



POLICY IMPLEMENTATION AND EDUCATION ACTIVITIES

Policy implementation within the Green Book framework begins at the outset of the project. Participation by stakeholders in defining the problem and policy focus is designed to result in continued involvement throughout project implementation. Public and private agencies at national and regional levels as well as local community representatives will be involved in seminars and workshops related to policy analysis efforts. The experience gained over time in policy implementation will feed back into the policy analysis and information system, the country Green Book. For example, as NGOs gain experience in dealing with the policy aspects of community resource management, they can provide brief case studies for inclusion and dissemination via the country Green Book. This framework can be used to easily track and adjust to what is learned through the project. Specific responsibilities include the following:

- The project team will have the responsibility of organizing seminars and analysis activities supporting policy implementation on a continuous basis. Results from the policy inventory will identify easily addressed issues as well as issues that are more administratively difficult to implement. The priorities are reflected in the policy analysis agenda.
- The participation of NGOs from the outset of project activities is crucial. These include the policy inventory and development of a participatory rural appraisal with policy and environmental elements. This will assure the critical inclusion of community based knowledge into the policy analysis process and information system. That information will also provide information useful to understanding the revenue implications of policy changes at the community and national level.
- The institutional mapping and stakeholder involvement within the policy inventory and agenda setting activities will begin an on-going discussion of the relative roles of different institutions. In many cases central and local government will need to provide support activities (versus policing) in order to enable communities to assume effective management of resources. Definition of these roles will be an integral part of research and analysis.

Training, policy analysis, and policy implementation will be integrated throughout the Green Book policy project. This activity will be decentralized and overseen by a broad-based

steering committee whose prime focus is training and institutional strengthening. Those doing the training, those being trained, stakeholders, and national, local and community interests will each be contributors and each have ownership in the product.

Policy agenda setting and revision, analysis and implementation is structured to provide ongoing educational materials available not only to involved stakeholders but adaptable easily to various other audiences. As the project implementors learn more about on-the-ground problems and policy issues through participatory rural appraisals, institutional mapping, baseline studies, policy studies and monitoring and evaluation of problem and policy indicators, it can better inform environmental education activities. The project will process what is learned about policy and resource user behavior into educational materials. As the country Green Book is designed to inform decision makers and stakeholders and to be revised as we learn more, so to will the input into the educational activities.

Policy dialogue will be greatly facilitated as information relevant to the strategic policy objectives become refined by project outputs. Clearly at some point in the future policy changes which promote sustained resource management at the community and resource user level will need to be identified and implemented. In order to achieve this goal, the project, by adopting a highly participatory approach will build a demand for the outputs of policy analysis. Educational activities based upon the Green Book and its periodic updates (perhaps on the desks of newspapers) as well as more focused specific outputs of analysis, will broaden the base from the initial (and evolving) set of direct policy analysis participants. The adaptation and refinement of the Green Book into a national context will also allow for wider dissemination activities of those national oriented products into classrooms, libraries, etc.

The next column includes the roles that the institutions play in the implementation of the policy. In some cases institutions have a mandate with respect to the policy that they should fulfill, but may be remiss in the obligation. Participants can indicate the supposed role and note the fact that the institution does not fulfill its mandate. In this column the team members will map out the array of actors, what they are doing, and what they are required to do based on the policy.

The fourth column lists the relevant actors within the institutions involved in the policy. These may be department heads, executive directors, mayors, assessors, environmental monitoring agents, or any other person that is involved in carrying out the policy and fulfilling the roles identified under key roles. Coupled with the work in the previous column this exercise helps the participants to identify and establish responsibilities for policy implementation.

The last two columns deal with stakeholder analysis. Stakeholders are those people or groups who are affected by the policy or by its reform or who have a particular interest in the maintenance or reform of a particular policy. The team leader can ask the following questions in this section to elicit responses from the group:

- Whose interests are affected by the policy and how?
- What groups are active in trying to influence the policy be either trying to change it or maintain it? Which groups must participate if the implementation of a policy is to be successful or conversely, which groups could undermine its implementation?
- Of these groups, which benefit from the policy and, conversely, which groups lose or suffer in some way from it?
- It is important that the team members understand that there is both a winning and a losing side to the effects of a policy and begin to think in terms of winners and losers.

As the participants list the stakeholders the team leader should direct them to identify those stakeholders that benefit from the policy and those who lose. These groups should be listed accordingly in the matrix (see Table 4 in Green Book Policy Inventory).

Completion of the stakeholder analysis will complete this session. The matrices developed during this session should be hung on the wall so that people can view them from their seats.

POLICY ASSESSMENT

This session should last one hour. Once again, it will build on the policy identification. The team leader will prepare matrices with five columns as shown in the sample below.

The purpose of this session is twofold. The first is to identify the impacts that the policies have on economic growth, social welfare, and on conservation and the environment. The second is to analyze potential policy alternatives and identify the constraints to implementation of reforms or alternative regimes. In the identification of the growth, welfare, and conservation issues, the participants should be referred to the relevant **Likely Impacts** boxes of the Green Book as a way to orient the participants to think about issues related to these categories prior to opening discussion. The policy and problem indicators should also be reviewed to provide ideas for this exercise. The team leader should also encourage the participants to explore temporal issues of growth and welfare. Impacts may differ if the policy is seen from both a short-term and a long-term perspective. Participant input into the matrix should reflect both perspectives, especially regarding welfare and growth impacts. The facilitator should attempt to complete this exercise within 30 minutes.

IDENTIFICATION OF POLICY ALTERNATIVES AND RESEARCH PRIORITIES

The second part of the exercise involves the compilation of recommendations for alternative priority policies that can address the issues raised throughout the exercise and especially issues related to the impacts of the policy on growth, welfare, and the environment. These policy alternatives appear in column four of the example matrix. The fifth column offers the participants the opportunity to identify the constraints involved in trying to achieve changes in policy. These constraints can be economic,

political, or social and can provide insights into the realm of the feasibility of enacting policy reform. The information should indicate which changes are realistically possible given the currently political climate and which may represent longer term objectives and why. This type of information can be very useful for policy and decision makers. Table 5 and 6 in the Green Book Policy Inventory provide a general specific case of the policy impact matrix.

Policy	Impacts on growth	Impacts on Welfare	Impacts on the Environment	Policy Alternatives	Constraints to Adopting Alternatives

252

The last two columns should also be completed within 30 minutes, for a total of 60 minutes for this session.

At the break the team leader should collect the matrices for presentation on the wall in a plenary session.

FINAL DISCUSSION

The last session of the day brings the small groups together to listen to and comment on the results. This session offers the opportunity for everyone to learn about the inventories of policies for each of the problems. Presentations should be generally short to ensure time for questions and comments from other groups. The team leader should note and draw attention to results that are common to the different groups.

The last session occurs in plenary in order to bring everyone together to share their findings. Each group will make a short presentation of the completed matrices demonstrating the results of the small group sessions. The presentation should describe the findings of the group and touch on each of the stages of the inventory. Presentations should be limited to about ten minutes per group to leave time for questions, comments, and possible additions by others. Ideally the room for the plenary will allow all matrices to be displayed at once to allow comparison.

Where groups have focused on only one problem, the time allotted to the exercise can be easily shortened and still succeed in information sharing and participation. If there is insufficient time the final presentations can be foregone. At the conclusion of the small group meetings the team leaders can tape all the matrices to the wall and during the break invite the participants to visit each group to see their inventories and ask questions. Thirty minutes can be allotted to this exchange, and then the group can be brought together for questions, comments, and closing remarks. The latter approach eliminates some of the participation that presentations engender, but may offer a more realistic approach if there are time constraints.