

PN-ABQ-139

AGRICULTURAL POLICY ANALYSIS PROJECT, PHASE II

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THE GREEN BOOK, PART 2: MANUAL FOR CONDUCTING A NATURAL RESOURCE POLICY INVENTORY

September 1993

**APAP II
Methods and Guidelines
No. 406, Volume II**

Prepared for

**U.S. Agency for International Development
Regional Office for Central American Programs
Regional Environmental and Natural Resource Project (RENARM)**

**Conducted under contract with Abt Associates Inc. and the Agricultural
Policy Analysis Project, Phase II (APAP II) with additional support from
Development Strategies for Fragile Lands (DESFIL)**

A.I.D. Contracts: DAN-4084-Z-00-8034-00, 596-0150-3-20010

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SEPTEMBER 1993

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LIST OF ACRONYMS

AID	Agency for International Development
APAP II	Agricultural Policy Analysis Project, Phase II
NGO	Non-governmental Organization
OAS	Organization of American States
RENARM	Regional Environmental and Natural Resource Management Project
ROCAP	Regional Office for Central American Programs
PVO	Private Voluntary Organization

PREFACE

The Agricultural Policy Analysis Project, Phase II (APAP II) developed and implemented natural resource and environmental policy inventories for AID's former Regional Office for Central American Programs (ROCAP). These inventories were a part of the Regional Environment and Natural Resource Management (RENARM) Project and took place in 1989 and 1990. The inventories occurred in the five Central American countries of Guatemala, Honduras, Belize, Costa Rica, and El Salvador. The RENARM Project subsequently supported the development of the *Green Book, Volume 1: A Policy Taxonomy and Analysis of Policies Affecting Natural Resources and the Environment* (Johnston and Lorraine, et al, 1992) in order to facilitate comparison of policies across countries and thereby suggest common problems and solutions. The *Green Book* provides the analytic base for future natural resource and environmental policy inventories.

This manual is volume two of the *Green Book*. It provides a description of the steps and processes involved in performing a policy inventory. In addition, it provides a detailed set of questions which are keyed to the policy taxonomy and analysis presented in Volume One. The questions and analysis represent a framework and methodology for performing an inventory which evolved from the previous experience and the demonstrated need to have a firm analytic base supporting the conclusions and recommendations.

Hilary Lorraine, RENARM Policy Program Coordinator is not only the principal coauthor but a critical supporter and conceiver of the *Green Book*. Bill Sugrue, Agricultural Development Officer for Guatemala on RENARM continues to be an enthusiastic supporter of this effort.

EXECUTIVE SUMMARY

A natural resource and environmental policy inventory is a comprehensive, initial step in establishing a policy reform, dialogue, and research agenda. It is a rapid appraisal technique for determining critical environmental and resource use problems and identifying policy constraints.

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 can be structured by the policy taxonomy and analysis summary presented in the *Green Book, Volume 1*. Questions to guide implementation of a policy inventory, keyed to the taxonomy and analysis, are provided.

1. INTRODUCTION

A natural resource policy inventory is a comprehensive tool for identifying critical problems and their policy interactions and proposing an agenda for policy reform or further analysis and research. The scope of an inventory related to natural resources and the environment is inherently broad. The fundamental question being asked is: "What are the policies affecting the use of natural resources and the environment?" These will include macroeconomic policy, non-resource sector policy, as well as resource specific policy sets. The broad focus of the inventory allows identification of key policies whether they initially seem of resource or environmental importance or not. Analysis and a participatory approach to implementing an inventory should provide appropriate rankings for proposed reforms and research recommendations.

1.1 Justification for Doing a Natural Resource Policy Inventory

A policy inventory is a first cut at defining problems and their policy causes. It can form the basis for future dialogue, reform and research. Other specific reasons for doing a policy inventory include:

- An inventory identifies many policies not initially obvious as important for natural resource problems.
- Inconsistencies 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.

1.2 Goal and Objectives

The goal of this report is to sketch 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 One.

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 implementation of a policy inventory and use of the analysis in the *Green Book*.

1.3 The Green Book

The methodology suggested here for performing a natural resource policy inventory has evolved from earlier efforts which resulted initially in the *Green Book, Volume 1*. The approach of Volume One to summarizing information at various levels of detail and abstraction suggested an easier or at least more comprehensive approach to the actual performance of policy inventories. The expected interface between the two documents is briefly mentioned below.

- Volume 1 provides the taxonomic structure for policy identification.
- Volume 1 provides key points, brief indicators of possible direction of relationships and summaries of analysis to support inventory field activities.
- Volume 1 provides an analysis and presentation framework which requires examination of a wider array of issues than might typically occur.
- This volume 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 in Volume 1 or the associated questions in this volume represent the complete universe for performing a policy inventory, they provide a firm foundation upon which additions and changes can be made.

2. THE UTILITY OF A NATURAL RESOURCE POLICY INVENTORY

2.1 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 which affect these problems?
- What is the nature of and magnitude of the relationship between policies and problems?
- What is the role of institutions, public and private?
- Who are the key stakeholders and how are they affected by the status quo or a possible change therefrom?
- How do policies affect short term and long term indicators of economic growth, welfare, and conservation?
- What are the priority policies for reform?
- What are the priority areas for further research?

2.2 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, project, or program design.
- It can be an initial element in a natural resource management project.
- It can form the basis for on-going analysis of policy issues and the evolution of environmental strategies.

3. THE COMPONENTS OF A NATURAL RESOURCE POLICY INVENTORY

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

- Identification of biophysical and socio-economic problems related to the use of natural resources and the environment is the first step. This step establishes the scope of the study and is based upon the purposes to 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 which follow.
- The second step requires identification of policies and regulations of both public and private institutions at the regional, macroeconomic, sector and sub-sector level which affect the natural resource base. The main objective(s) and/or outcomes of the respective policies and regulations are stated. This is the data collection and compilation phase. The team identifies the content of major policies through an examination of secondary sources and interviews with stakeholders in the public and private sector.
- The identification of the public and private institutions which make or implement the respective policies and regulations stated in the second step comprises the third step. This description outlines 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.
- 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 interactions 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 assessed.
- The 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 revision as more is learned and understood and as more people participate and review the results.

3.1 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 or other critical documents. It will be the responsibility of the inventory team to provide a summary and supporting documentation for critical natural resource and environmental issues. This process will require interaction with the client and the host government. The inventory can look at a limited number of high priority problems but not the entire range of problems. In addition, the nature of problems may not be that well understood. Significant controversy may exist about the source of a problem. For example, the role of fuel wood collection in deforestation has been subject to much debate in some of the countries in Central America. The physical interdependencies are also often quite complicated and not easily described. Nevertheless, a policy inventory needs to provide from secondary sources and expert interviews a rudimentary picture of the problems. If the inventory is generously funded more can be examined.

It is common for the client or government to identify the critical problems before the inventory is begun. That leaves the task of description of the problem to the implementing team. For example, the initial series of natural resource policy inventories were funded by AID's then Regional Office For Central American Programs (ROCAP). ROCAP had produced a regional environmental strategy which had identified four resource problem areas: sustainable agriculture, production from natural forests, watershed management, and wildlands and biodiversity. These were the primary problem categories for the inventories performed in the region. There were, however, additional issues raised in each country which required attention. These included coastal zone management and industrial pollution, among others.

The problems that can be addressed depend on the funding level. Since policy inventories are labor intensive, it is likely that some selectivity in the choice of problems to be addressed will be needed.

The specification of problems will have to capture a number of traits and interdependencies and consider and define a set of indicators. We have aggregated the problem definition base indicators into three categories: economic growth, welfare and conservation. Each are discussed in more detail below. The actual context of the problem definition segment will draw from the existing, often incomplete, information. The description should also list areas of conflict in problem definition. 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 discuss the effects of policy or policy sets on these problems and sets of indicators.

3.1.1 Growth Indicators

Natural resource policy making often requires trade-offs between short term and long term objectives. Reaching conservation or sustainable production objectives will involve some

short term costs. The following list gives some guidance on aspects of these indicators. The list is not exhaustive but indicative.

- Gross National Product and mix of production
- Efficiency changes in production, marketing and trade
- Foreign exchange and trade patterns
- Government resource availability, cost, efficiency and allocation between different uses
- Inflation, interest rates, and money supply

3.1.2 Welfare

Similar trade-offs in the welfare of groups or individuals and in the winners and losers from a policy set or change in policy set will also need to be understood. Some of those indicators include:

- Employment, income and per capita income, and prices of inputs, outputs, food, etc.
- Winners and losers from the current situation and potential changes in that status quo
- Quality of life as represented by exposure to toxic chemicals, use of marginal lands, among others
- Improved public sector services
- Access to resources

3.1.3 Conservation

Conservation or environmental indicators include a wide array of physical and biochemical interdependencies:

- Resource bases: land uses, areas deforested, amount of marginal land under cultivation, amount of land under-utilized, reforestation areas
- Resource use characteristics such as soil erosion; sedimentation; waterlogging; contamination from industrial wastes or pesticides; air, land and water quality, etc.
- Biodiversity, wildlife habitat and numbers

3.2 Policy Identification

There are a large number of policies that affect the use of natural resources and the environment. This section discusses a method for identification of those policies. This method evolved from the experience of APAP II's natural resource policy inventories in Guatemala, Honduras, Belize, Costa Rica, and El Salvador and carried into the development of the *Green Book*.

The scope of a natural resource and environmental policy inventory is wide. The policy set is not limited to a sector or sub-sector but the entire range from macroeconomic policies to pricing to local user regulations. One is concerned with how policies affect resource user behavior. In addition the policy inventory needs, ultimately, to identify policies which do not exist in a given country but which could improve the situation if adopted.

3.2.1. Policy Taxonomy

To respond to the need to quickly identify important policies and potential policies, a policy taxonomy was developed. The present version of this taxonomy is presented in APPENDIX A. The process was facilitated initially by comparison of the existing policy inventories. Other categories were added based upon review of policy studies and analysis from other regions of the world. The present list of policies is incomplete and will be revised in subsequent drafts to include important missing categories such as trade and investment policies and energy policies.

The policy taxonomy has been used to provide 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 between growth, welfare, and conservation is provide for some policies. The *Green Book* also provides case studies and cross policy analysis in order to capture the interactions among policies.

3.2.2. Policy Matrix

To aid in specifying 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. Using the problem definition categories as columns and the policy taxonomy as rows, the inventory team can fill in the resulting cells by identifying the relevant policies, if any, in that cell. This initial description can begin the research or investigative process. During inventory implementation some policies will be dropped as unimportant and others will come to light.

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

The process of filling in the matrix is educational for all who participate. It is inherently a broadening exercise since those with expertise in one area will be exposed to the policy relevant information in other areas. 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.

3.2.3. Guiding Questions

APPENDIX B provides a set of guiding questions. The questions are designed to guide the information gathering process of the inventory. Since 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. The analysis in the *Green Book* sets up the questions and the connection between the two allow 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.

Finally, the questions are guiding in that the specific context of a set of policy/problem issues will reveal heretofore unidentified policies or issues which add to what needed to 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, inter alia. For example, questions on forest concessions will be irrelevant while controls on private timber management are more important. Similarly, policies related to management of protected areas may be unimportant if no such units exist or none are possible. The taxonomy structure allows for a flexible framework and the guiding questions serve only as aids to a flexible process.

3.3 Institution and Stakeholder Identification

3.3.1. Policy Matrix and Institutional Mapping

The policy matrix can also be used to present the institutions most important to a given policy as well as the institutional issues which often inhibit or limit the application of policies. For example, many developing countries have limited technical or field staff to successfully monitor resource management or environmental requirements. Budgets are small, staff are poorly trained, or conflicts in mandates or gaps in mandates exist, among others.

This information can be gathered through interviews and through contributions by team members experienced or knowledgeable with 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 which captures the nuances and details of individual institutions be presented

as well as an abbreviated institutional map showing the multiple institutions often involved with a particular policy/problem set.

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. More detailed descriptions will need to have the following information:

- What are the functions of the institution related to this policy/problem 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?

3.3.2 Stakeholder Identification and Analysis

It is also 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 helps predict problems that may arise from some individuals and groups opposed to proposed changes in the status quo. This information can be gathered occur 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?
- How does this distribution affect policy reforms strategies and the policy research and analysis agenda?

Some of this information will be policy specific while other information will summarize the nature and affect the concluding assessment and recommendation elements of the inventory. Most of the information will be in text associated with each policy or institution. Other information can be summarized over policy areas. To this point in time actual implementation of a policy inventory has been descriptive and textual in presentation. Future inventories, looking into a future of setting up policy implementation activities, will want to consider use of stakeholder analysis and political mapping. More detailed information on each can be found in Crosby (1992a, 1992b).

Both stakeholder analysis and institutional mapping represent a set of diverse set of tools designed to clarify the current situation and by doing so facilitate needed changes. Stakeholder analysis indicates whose interests should be taken into account when making a decision (Crosby, 1992a). In a policy inventory it can be useful to present information in tabular form 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. In natural resource and environmental policy issues, the inventory will specifically have to consider public goods and the effect that the existence of public goods traits have on group formation and problem resolution.

Political mapping (Crosby, 1992b) will more than likely be beyond the scope of a policy inventory. Nevertheless, consideration or use of these exercises can better structure information for future policy decisions. Micro-political mapping, policy network maps and force-field analysis provide varying levels of description on the roles the most important political groups have played with respect to a given problem. Information will include generally whether a group is opposed, in favor of, or neutral and the nature of their position and magnitude of their position.

3.4 Policy Assessment

Analysis and assessment of the effects of policies is a process of understanding the behavioral responses of people using resources to a given policy change. This entails a combination of empirical observation and behavioral (or economic) theory. From a practical point of view there is a wide array of indicators for economic growth, welfare, and conservation effects. A fundamental question is what are the effects of the policy on short-term as well as long-term conditions.

3.4.1. Preliminary Assessment of Policy Impact

The purpose of an inventory is to reach a tentative conclusion about policy effects and potential reforms and establish an agenda for dialogue and further analysis. Determining those recommendations comes from a process of estimating the importance of a given aspect of a problem area and the policies which have the most influence on the problem and/or the most likely policy subject to change with a refined analysis of options. Those policies may well include policies not currently existent 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 will need to understand the perceived direction of the relationship. Whether a policy affects the problem in question and the associated indicators in a positive or negative direction (and what individuals or groups) will often represent a significant step forward in our 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. The greater level of on-the-ground experience on the inventory team or accessible to the team will facilitate this process.

The *Green Book, Volume 1* is designed to provide not only a set of questions to guide information gathering but also to provide an initial analytic base from which analysis and assessment can begin. It is not only a framework for the inventory but the refined and condensed experience with these policies as reflected in previous inventories and in literature review and summaries from world-wide experience. This is how the process might occur.

- A review of "key points" indicates that the policy is relevant to the issues of this country.
- The guiding questions provide information which could be interpreted based on the summary analysis from which the guiding questions were derived.
- The analysis could be adjusted for empirical information in the country. Additions, deletions, and corrections to reflect on-the-ground reality would be summarized in the text.
- The assessment would be structured around the problem areas and sub-structured around the policy taxonomy elements identified as important for the country.
- Initial analysis and assessment should be empirical and value neutral, describing the policy interactions, the institutional features, and the winners and losers, but not ranking the problem, causes or establishing an agenda. That process should be transparent and occur in the final set of inventory activities.
- On-going participation by clients and stakeholders should be used 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 document will have to reflect the expertise on or available to the inventory team.

3.4.2. Analysis of Policy Interactions

Policy interactions on a given problem manifest themselves as a matter of course during the implementation of a policy inventory. The problem/policy matrix, stakeholder analysis, and institutional mapping will each provide information on policy interactions. Empirically it will often be difficult to disaggregate these identified interactions and thereby suggest, through preliminary assessment, how to proceed. At this stage of the analytic process, however, merely noting the interactions should suffice. These types of policy interactions can be subject to further research.

The *Green Book, Volume 1* provides some guidance on policy interactions through case studies and through specific box summaries of cross-policy analysis. 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 addresses cumulative, conflictive, complementary and sequential policy interactions.

3.5 Identification of Policy Alternatives and Research Priorities

Many important resource and environmental effects of policy changes remain to be understood and studied. Empirical evidence is scarce. Policy regimes or changes that have broad economic importance such as monetary, fiscal, and trade policies and sectoral policies are not easily connected to natural resource users and outcomes. Some issues may be clear but we are often left with a series of questions and research issues and little in the way of definitive answers. Often we depend solely on economic theory or even more broadly on behavioral assumptions which may or may not play out in a real world context. Nevertheless, some conclusions can be reached relatively easily or requires some action because of the severity of the problem. Other issues can be deferred until more in depth analysis and research are completed. A policy inventory should include both reform and research agenda recommendations.

The presentation on conclusions and recommendations should include both the policy change and policy research and analysis agenda. This will capture the essence of the understanding between what we know and what we have yet to understand.

3.5.1 Potential Policy Alternatives

While our understanding of many policy effects is shallow, many policies are reasonably well understood or have obvious institutional based issues and solutions. For example, many developing countries have declared public 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. Correction of this may entail a mixture of public, communal, and private ownership depending upon local circumstances and conditions.

Often there are many institutions with different and conflicting responsibilities for a resource. Each institution is also likely to be under-funded or inappropriately staffed. Remedial activities suggest rationalization of institutional responsibilities or examination of ways to improve funding for some activities.

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 see

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. The priorities should not be driven by only one set of values, economic theory or otherwise.

3.5.2 Further Analysis

Similarly, 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 for the client since it may well be the initiating document for a policy analysis project. Gaps in policy knowledge and the examination of alternatives not presently considered will be major foci of the agenda. Further refinement of our understanding of the trade-offs between policies can also be justified as a part of a research agenda.

4. IMPLEMENTATION OF A NATURAL RESOURCE POLICY INVENTORY

4.1 Information Requirements

A policy inventory draws from secondary published sources such as government reports, public and private sector bank reports, analysis performed for other projects, newspaper articles, and academic writings. In addition, inventory team members will perform interviews with knowledgeable people in the public and private sector. Most important, however, is the composition of the team. Inventories in Central America performed by the APAP II project involved significant host national participation through sub-contracts 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 to review secondary information or perform interviews.

The type of information gathered limits the sophistication of the subsequent analysis. However, the breadth of the inventory will provide a forum for a much larger discussion of policy than more narrow and more statistically sophisticated techniques can handle.

4.2 Process

The implementation of a natural resource policy inventory should be flexible: many steps can be implemented at the same time. The primary steps have each been discussed in some detail. Implementation of these steps are listed below.

- **Initiation trip or planning activities:** An initial set of activities will allow 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 the inventory.

Problem Identification

- Describe socio-economic problems and behavior and their biophysical and resource use consequences (such as poverty and deforestation, population growth and soil fertility, macroeconomic situation and rural/urban migration, etc.).
- Identify and rank problem issues relevant to interests of client.
- If appropriate, perform participatory rural appraisals to identify resource user behavior and effects of policies at local level.
- Identify baseline indicators and data of resource use and resource use practices for assessment and future monitoring and evaluation activities.

- Summarize problems and indicators in a text which 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 an initial identification of relevant policies.
- Have team members and counterparts gather information on each policy, describing its main objectives and outcomes. The guiding questions in APPENDIX B provide the structure and detail to do this.
- Information should be as detailed as possible; 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 which 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 impacts of institutions and regional variation.

Policy Assessment

- Using summary analysis in the *Green Book, Volume 1* and empirical expertise on the team and information by the team, provide an assessment of resource policies and institutions.
- 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 it as appropriate.
- Draft the final report and executive summary. Present these findings to wider audiences.
- If appropriate, draft scopes of work for immediate policy analysis activities.

4.3 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 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 enough background and access to get the information needed in a relatively short amount of time. If not nationals, they need to have unique skills unavailable in the country. While some of the core team will have to work full time, others may be contracted on a part time basis.

4.4 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.

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APPENDIX A: NATURAL RESOURCE AND ENVIRONMENTAL POLICY TAXONOMY

FOREST MANAGEMENT POLICIES

Concessions for the use of public timber

- Duration of concessions
- Conditions and restrictions on timber concessions
- Award process for timber concessions

Forest revenue systems

- Charges on concessions
- Charges on timber harvested
- Charges on forest products production
- Charges for service
- 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

Policies affecting tree tenure and private forest management

Reforestation policies

- Fiscal incentives and policies
- Public reforestation projects

AGRICULTURAL AND LIVESTOCK POLICIES

Product price controls

- Ceiling prices
- Floor or support prices
- Price bands and other policies

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

LAND TENURE AND COLONIZATION

Land tenure and markets

- Property rights
- Ownership distribution
- Land markets

Colonization and reform

- Direct government policies
- Indirect government policies
- Spontaneous settlements and invasions

PROTECTED AND RESERVED AREAS

Management issues

Resource management and the local community

- Direct cash incentives and disincentives
- In-kind incentives and disincentives
- Fiscal incentives and disincentives

Financing

- International NGOs
- Foundations, trust funds, endowment funds
- PL-480 funds
- Foreign aid
- Joint government-NGO financing
- Debt-for-nature swaps
- Bilateral debt-for-nature swaps

International conventions and support

- Convention on wetlands of international importance especially as waterfowl habitat (Ramsar, 1971)
- Convention concerning the protection of the world cultural and natural heritage (Paris, 1972)
- FAO international undertaking on plant genetic resources (Rome, 1983)

Nature tourism

INDIGENOUS PEOPLES

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 ecotourism
- Recreational development
- Protection of boundaries
- Economic development projects

International legal instruments

- UN charter
- Convention on Prevention and Punishment of the Crime of Genocide
- The Organization of American States Charter
- Other sources of policy

Changing values and moral persuasion

- UN Working Group on Indigenous Populations
- International Conference of NGOs, Indigenous Peoples and Land (1981)
- Inter-American Indian Congress

WILDLIFE PROTECTION AND TRADE

International conventions

Export controls and cross-border issues

Hunting laws

COASTAL ZONE MANAGEMENT

Coastal protection and development

- Mangroves and other protected areas
- Development policies

Fishery regulations

WATER POLICY AND WATERSHED MANAGEMENT

Water control, use and pricing

- Water control and use
- Water pricing

Irrigation provision and pricing policies

ENVIRONMENTAL MANAGEMENT POLICIES

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

MACROECONOMIC POLICIES

Monetary and credit policies

- Monetary policies
- Credit policies

Trade and exchange rate policies

- Exchange rate policies
- Tariff and trade policies
- Export promotion

Fiscal management

- Fiscal deficits
- Debt financing
- Debt-for-nature

POPULATION

Government support

Programs to increase the status of women

Specifying and enforcing responsibilities of men

Promoting smaller families

Providing fertility regulation and family planning services

Incentives and disincentives

Redistributing population

Legal reform

Information collection and evaluation

APPENDIX B: GUIDING QUESTIONS

FOREST MANAGEMENT POLICIES

► CONCESSIONS 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 size cutting restrictions?
- Are the requirements enforced?
- Does the implementing agency have the technical expertise and capacity to monitor selective cutting practices to assure that incidental damage is minimized?
- Are time limits for cutting a part of 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?
- Has award of the concessions been an open or closed process?

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- Would the industrial structure, such as an oligopoly, attenuate a competitive bidding process?

▶ **ALTERNATIVE FOREST CHARGES AND THEIR EVALUATION**

General Questions intended to describe the timber market, charge system and forest use situation over time.

- 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 timber supply by type of product and whether the source is public or private land?
- Describe timber and wood product demand? Domestic vs. international by product.
- Do any forest charges affect user behavior? 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?
- Are timber charges varied by distance?
- 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 mini-cases 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?

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- Does the fee generate much government revenue?
- Is there an annual ground rental? How large? How set?
- Revenues 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 set? Revenues generated?
- Does the forest management institution have the resources to administer this charge well?

CHARGES ON TIMBER HARVESTED

- Is there a per-tree charge? Describe? How large? How set?
- Do charges vary by species or diameter?
- Are there volume-based charges? These could be 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, value-related (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? Uniform charge vs. variable rate structure?
- Do the charges reflect stumpage values?
- Are there charges based on area logged? Size? How 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 a 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?
- Are there charges on minor or non-timber forest products? Describe. Is it per-unit or volume based? How set? Describe those involved in these activities and how they would be affected by the/a charge.
- Are there foreign trade or export charges? Describe. Per-unit or ad valorem? How 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 over- or under-invoicing common?
- Are there different charges for logs vs. processed timber products?

CHARGES FOR SERVICES

- Describe any user fees which 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 worker, 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.
- 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 and processing and export operations?
- Are bans, taxes and quotas enforceable or does over-and under-invoicing exist?
- Does government export policies differentiate between processed and non-processed products?
- Is there 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? Has 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 for short term profits?

► **POLICIES AFFECTING TREE TENURE AND PRIVATE FOREST MANAGEMENT**

- 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?

► **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 individuals or groups benefited especially 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 mono-species plantations?
- 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 deposit fee applied solely to reforestation or placed in general revenue or other non-reforestation activities?

PUBLIC REFORESTATION PROJECTS

- What reforestation activities have been large government projects on public land vs. community or small holder projects?
- Describe direct government involvement in reforestation project. 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: restoration of degraded areas, enrichment planting of primary species, or establishment of plantations?

AGRICULTURAL AND LIVESTOCK POLICIES

► 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 on 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?

- Are there 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 the subsidies been in effect?
- Describe the overall status of the financial sector and the availability of credit to the agricultural sector vs. other sectors.
- Is there evidence to indicate that the credit is not being used for its original purpose?
- Is credit granted for labor intensive or capital intensive activities? Describe.

PESTICIDE SUBSIDIES

- Describe the nature of pesticide subsidies: tax and tariff concessions, low-interest farm credits, incentives for local manufacturers and direct marketing subsidies.

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- What crops and what types of farmers benefit the most from the pesticide subsidies?
- What crops use the most pesticides and are there poisonings associated with such crops?
- Are there cross-border policies which affect the availability and use of pesticides within the country?

FERTILIZER SUBSIDIES

- Are there fertilizer subsidies?
- What are the crops primarily benefiting from these subsidies?
- Does evidence suggest that improved use of inputs (mostly improved seed varieties) has resulted from fertilizer subsidies?
- Is there evidence that the subsidies have muted the adoption or use of organic means of improving soil fertility?
- What are the costs and efficiencies of the fertilizer subsidy and distribution systems?

SUBSIDIES FOR AGRICULTURAL MACHINERY

- List any policies subsidizing agricultural machinery. For example, favorable tax or tariff treatment, rationed foreign exchange, credit, etc.
- What type of farming and farmers benefit from these subsidies?

► DIRECT GOVERNMENT ACTIVITIES

INPUT MARKETING

- Does the government through a government agency or parastatal provide agricultural inputs?
- Is this activity targeted to particular groups, activities or crops?
- Is there evidence that crop mix or intensity is affected by the use of these inputs?



- Are there educational, extension, or health aspects to the input distribution activities?
- Describe any regulations which relate to input marketing.

PRODUCT MARKETING

- Describe direct product marketing activities.
- 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 for determining 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

- After describing individual policies favoring livestock operations, list the policies and describe what is understood about the cumulative effects.

CREDIT POLICIES

- Do livestock operations receive favorable credit preferences? Describe.
- What proportion of agricultural sector loans go to livestock operations?
- Describe the size of the operations usually receiving credit?

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 as 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?

LAND TENURE AND COLONIZATION

► 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 non-urban 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?

► COLONIZATION AND REFORM

DIRECT GOVERNMENT POLICIES

- Does a formal program exist for redistributing private or government-owned land?
- What are the conditions under which privately-owned 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.

PROTECTED AND RESERVED AREAS

► MANAGEMENT ISSUES

- 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?

► **RESOURCE MANAGEMENT AND THE LOCAL COMMUNITY**

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, 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.

► **CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE ESPECIALLY AS WATERFOWL HABITAT (Ramsar, 1971)**

- Are any wetlands designated under this convention? Is it adequately protected?

► **CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE (Paris, 1972)**

- Is the country a party to this treaty?
- Are there any sites designated under this treaty?
- Does the country pay into the fund?

► **FAO INTERNATIONAL UNDERTAKING ON PLANT GENETIC RESOURCES (Rome, 1983)**

- 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.

INDIGENOUS PEOPLES

► **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?

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, i.e. 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?

► 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?

CONVENTION ON PREVENTION AND PUNISHMENT OF THE CRIME OF GENOCIDE

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

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

INTERNATIONAL CONFERENCE OF NGOS, INDIGENOUS PEOPLES AND LAND (1981)

INTER-AMERICAN INDIAN CONGRESS

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?

COASTAL ZONE MANAGEMENT

► COASTAL PROTECTION AND DEVELOPMENT

- Describe the role of public and private property?
- Provide an institutional map of public and private institutional responsibilities.
- Describe development activities such as mariculture.

► MANGROVE AND OTHER PROTECTED AREAS

- Describe the resource and institutional interdependencies for the coastal zone of the country?
- Describe the private and public property system associated with the coastal zone?
- 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, i.e. from mangroves to urban or tourist activities?
- 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?
- Describe the regulatory system. Is it perceived to be too complicated or time consuming?

DEVELOPMENT POLICIES

- 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?

- 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?

► FISHERY REGULATIONS

- 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?

WATER POLICY AND WATERSHED MANAGEMENT

► WATER CONTROL, USE AND PRICING

WATER CONTROL AND USE

- 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.

WATER PRICING

- 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 some users priced while other not charged? Describe the incidence of the fees.
- Are any other fees, such as water distribution fees, charged? Describe.

► 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?

ENVIRONMENTAL MANAGEMENT POLICIES

► 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?
- 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)?

MACROECONOMIC POLICIES

► MONETARY AND CREDIT POLICIES

MONETARY POLICIES

- Describe the country's monetary policy?
- What has been the trend in the country's inflation rate?
- What are the nominal and real interest rates?
- Does monetary policy discourage long-term investment?
- Is Monetary policy contractionary or has it been so in the recent past?
- Is the economy stagnate, unemployment high and increasing poverty a problem?
- Is monetary policy expansionary? What is the rate of inflation and the real interest rate?
- What has been the trend in per capita consumption, unemployment and underemployment?
- Has any connection been made 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 agricultural or livestock operations?
- Describe the sources of credit available to resource sectors such as agriculture and forestry. What groups benefit or lose from this system?
- 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?

► TRADE AND EXCHANGE RATE POLICIES

EXCHANGE RATE POLICIES

- 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 domestic products? Has the policy changed in recent years? Describe the recent history of this 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 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?

TARIFF AND TRADE POLICIES

- What is understood about the rate of effective protection for resource related production in the country?
- What is the relative rate of protection for different domestic sectors? Are they biased in favor or against certain sectors?
- Is there a parallel market? Describe.
- Has the trade and tariff system resulted in inefficient sectors of the economy?
- Describe the resource use consequences.
- In the early stages of liberalization, there may be increased pressure on resources. Is there evidence of such?

EXPORT PROMOTION

- Does the government provide export promotion incentives? Describe.
- Have the incentives been designed to address other - anti-export - policies?

- What crops have been affected by export promotion?
- How have production of these crops affected the economy and the welfare of various groups in the rural sector?

► 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 does the allocation of public expenditures affect long term 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?

DEBT FINANCING

- If the debt is financed with domestic credit, what is the rate of inflation?
- Does the domestic debt financing crowd out funds for other investments, such as long-term 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

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

POPULATION

▶ GOVERNMENT SUPPORT

- 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?

▶ PROGRAMS TO INCREASE THE STATUS OF WOMEN

- Are there programs to increase the status of women?
- Are they effectively implemented?
- What is the education level of the female population?

▶ SPECIFYING AND ENFORCING RESPONSIBILITIES OF MEN

- Do policies specify the role of men in family planning?
- Do educational efforts support these policies?

▶ PROMOTING SMALLER FAMILIES

- 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.

▶ PROVIDING FERTILITY REGULATION AND FAMILY PLANNING SERVICES

- What is the role of the private and public sector in fertility regulation and family planning services?
- How are services financed? Are they subsidized?

INCENTIVES AND DISINCENTIVES

- 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.

▶ REDISTRIBUTING POPULATION

- Has the government explicitly or implicitly promoted redistribution of population? Describe.
- What are the important demographic issues in the country?

▶ LEGAL REFORM

▶ INFORMATION COLLECTION AND EVALUATION

APPENDIX C: SCOPE OF WORK FOR A NATURAL RESOURCE POLICY INVENTORY

AGRICULTURAL POLICY ANALYSIS PROJECT, PHASE II NATURAL RESOURCE POLICY INVENTORY IN COUNTRY NAME

SCOPE OF WORK

A Policy Inventory for Natural Resources will be conducted for USAID/MISSION NAME by a four person team under the auspices of the USAID Agricultural Policy Analysis Project, Phase II over a six week period sometime between DATE and DATE.

The Policy Inventory will identify policies and regulations that affect the natural resource base in COUNTRY NAME. The natural resources that will be emphasized in the Inventory concern: forestry, agriculture, land use and water management, energy, land tenure, indigenous peoples (OR OTHER ISSUES IDENTIFIED BY THE CLIENT). The Inventory is designed to serve as the basis for in-depth policy analysis and to facilitate policy dialogue.

The framework for the Inventory is provided in Johnston, George, et al. (1992) *The Green Book, Volume 1: A Policy Taxonomy and Analysis of Policies Affecting Natural Resources and the Environment*. USAID: APAP II Methods and Guidelines, No. 406. In addition the Inventory will use a *The Green Book, Volume 2: Manual for Doing a Natural Resource and Environmental Policy Inventory*.

There are five major components to conducting the policy inventory:

1. Identification of biophysical and socio-economic problems related to the use of natural resources and the environment. This step established the scope of the study and is based upon the purposes to which the study will be used, existing secondary information and stakeholders at all levels. The Mission should take a major role in this stage. Identification of problems also provides a framework for organizing the policy assessment and facilitating the steps which follow.
2. Identification of policies and regulations of both public and private institutions at the regional, macroeconomic, sector and sub-sector level which affect the natural resource base. The main objective(s) of the respective policies and regulations will be stated. This is the data collection and compilation phase. The team will identify the content and objectives of major policies through an examination of secondary sources and interviews with stakeholders in the public and private sector.
3. Identification of the public and private institutions which make or implement the respective policies and regulations stated in (2). This description outlines relative roles and responsibilities of relevant government and private sector institutions.

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4. A preliminary qualitative assessment of the impact of these policies and regulations on each of the natural resources.
5. Identification of the main policy alternatives and factors affecting possible policy reform.

QUALIFICATIONS

The team leader will be a natural resource economist. The remainder of the five person team will consist of the following skills, either local counterparts (consultants) or other expatriates depending on the resource issues to be examined and the local expertise available.

1. Experience and knowledge in one or more of the following areas:
 - a) natural resources policy analysis (the ability to link problems in maintaining a sustainable natural resources base to the implementation (or lack thereof) of policies or regulations.
 - b) natural resource management, forestry or agronomics related to sustainable management practices.
 - c) environmental and natural resource laws and regulations.
2. Knowledge of and contact with government institutions (regional and COUNTRY NAME) and private organizations (NGOs and PVOs) involved in policy making and implementation of policies affecting the natural resource base in COUNTRY NAME.
3. Excellent interviewing and verbal communication skills. Bilingualism is preferred.
4. Ability to write well in English is highly desirable.
5. Ability to work well on a team, meet deadlines, and work under pressure.
6. The persons should have, at a minimum, a Masters degree in a relevant field of specialization for this study.

The salary will be commensurate with experience.