Stakeholder Analysis

Readings and Resources for Community-Based Natural Resource Management Researchers

Volume 7: Supplement for Conflict and Collaboration Resource Book

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for
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Supplement: Stakeholder Analysis

A. The CBNRM Social Science Resource Kit

The CBNRM Social Science Resource Kit is a reference tool to assist researchers to apply concepts, analytical approaches and research methods from the social sciences in their research. It is being delivered as a set of ***resource books,*** each dealing with a different key issue area related to community-based natural resource management (CBNRM) research. The topics/issue areas covered include: Gender; Community-Based Natural Resource Management; Participatory Research; Indigenous Knowledge; Institutional Analysis; Common Property; Stakeholder Analysis; Participatory Monitoring and Evaluation; and Resource Tenure.

B. Readings on Stakeholder Analysis

The readings included in this supplement are intended to compliment the material appearing in *Cultivating Peace: Conflict and Collaboration in Natural Resource Management* [1], an edited volume which IDRC is distributing to its researchers and associates as a resource on conflict management. The readings are meant to introduce the reader to some of the more practical aspects of "stakeholder analysis", a tool which is increasingly being used in CBNRM research for collaborative planning and conflict management.

Stakeholder (or multi-stakeholder) analysis can be defined as "an approach and procedure for gaining an understanding of a system by means of identifying the key actors or stakeholders in the system, and assessing their respective interests in that system" (Grimble and Chan, 1995). Stakeholders include all those who affect, and/or are affected by, the policies, decisions, and actions of a system (ibid). In conflicts over natural resources, stakeholder analysis provides a framework for examining who is involved, where their interests lie, and how they relate to each other in terms of power. Such an analysis can lead to a better understanding of who is affected by and who can influence the way natural resources are managed (Buckles, 1999). Ultimately, the goal is to help find ways to turn situations of conflict into opportunities for collaboration.

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[1] D. Buckles (ed.). 1999. **Cultivating Peace: Conflict and Collaboration in Natural Resource Management.** International Development Research Centre/The World Bank, Ottawa/Washington, D.C. Also available on-line at http://www.idrc.ca/minga/conflict/cases_e.html

Stakeholder analysis employs a variety of methodologies, including participatory rural appraisal (PRA), action-research, gender analysis and the analysis of differences in class and power (Buckles, 1999). This supplement presents readings which focus on a participatory approach to stakeholder analysis. Readers are also encouraged to consult previous resource books in this series for descriptions of other relevant participatory techniques which can be adapted and employed for stakeholder analysis [2].

In the first reading, "Stakeholder Analysis for Natural Resource Management in Developing Countries", Grimble and Chan give an overview of the principles of stakeholder analysis. They describe what it is, when it can be used, and how it can be applied, quoting examples from northern Thailand. They outline a step-by-step framework for analysis, offering concrete suggestions about which field methods and techniques are most useful for information gathering at each stage of the enquiry.

In the reading "Stakeholder Analysis", taken from IIRR's toolkit *Participatory Methods in Community-Based Coastal Resource Management,* Madamba-Nuñez and Ira provide a suggested approach for carrying out a participatory, field-level analysis of stakeholders and their interests. The paper includes descriptions of how to construct various matrices to elicit and organize stakeholder information.

References

A copy of the full-text of each of the following articles is included in this document. To find a reading, flip to the corresponding tab number. These materials have been reproduced with permission from the publishers.

1. Grimble, R. and M.K. Chan. 1995. **Stakeholder Analysis for Natural Resource Management in Developing Countries.** Natural Resources Forum 19(2), 113-124. Reprinted with permission from Elsevier Science.

2. Madamba-Nuñez, M.G. and G.C. Ira. **Stakeholder Analysis.** In *Participatory Methods in Community-Based Resource Management (3 Vols.).* Vol. 2, pp. 33-41. International Institute for Rural Reconstruction (IIRR). Silang, Cavite, Philippines. Reprinted with permission from IIRR.

[2] The PRA techniques covered in the *Institutional Analysis Resource Book* are of particular relevance, but see also the Resource Books on *Gender, Participatory Research, and Indigenous Knowledge* for descriptions of gender analysis, interviewing, focus groups, participant observation, Venn diagrams and other techniques which can be adapted and used as well.

C. Websites and Discussion Groups

This section presents key websites and mailing-lists related to conflict management and CBNRM that offer useful resources for researchers.

Websites

1. Cornell/PERC - Institute on Conflict Resolution

http://www.ilr.cornell.edu/ICR/default.html

The Cornell/PERC Institute on Conflict Resolution is supported by the Foundation for the Prevention and Early Resolution of Conflict (PERC), a non-profit organization dedicated to "hands-on" engagement in conflict prevention and resolution. The Institute focuses on all areas of conflict prevention and resolution, including those relating to business, environment, communities, civil rights and health care, and what has come to be referred to as alternative dispute resolution (ADR). The site includes a section on news and announcements, and a comprehensive list of links to sites on the web that deal with conflict resolution, at extension http://www.ilr.cornell.edu/ICR/links.html The site also links to the Internet-based distance learning program PERC 101, which covers the mechanics of conflict resolution such as mediation, arbitration, negotiation, and litigation.

2. The Cornell Program on Environment and Community

http://www.cfe.cornell.edu/pec/

The Program on Environment and Community (PEC) was established as a unit within the Center for the Environment at Cornell University in 1994. Initially created as the Cornell Program on Environmental Conflict Management, PEC seeks to foster more effective management of environmental, community, and public policy conflicts. Work in Southeast Asia has emphasized the development of networks of environmental mediation practitioners, with primary focus in Indonesia. Additional program activities include emerging work in the Philippines and southern China. The site includes a brief description of the program's approach, and a summary of its national and international programs.

3. The Center for Security Studies and Conflict Research

http://www.fsk.ethz.ch/

The Center for Security Studies and Conflict Research is based at the Swiss Federal Institute of Technology Zurich. It is an independent academic institution doing research and teaching in the fields of national and international security policy and conflict analysis. The site includes sections describing the centre's conflict research projects and publications; an events calendar listing lectures and conferences; and links to the International Security Network (ISN) page maintained by ENCOP (see entry below). The ISN page links to numerous security-related Web pages, including major institutional sources of information on environmental security and environmentally-caused conflicts, and provides keyword searches and resources organized by subject, region, institution and event.

4. ENCOP - Environment and Conflicts Project

http://www.fsk.ethz.ch/encop/

ENCOP is jointly run by the Center for Security Studies and Conflict Research at the Swiss Federal Institute of Technology, Zurich (ETHZ), and the Swiss Peace Foundation, Berne. Its goals are: to take stock of the many different types of inter- and intranational conflicts that have turned violent and are caused by (or in combination with) ecological degradation; to develop an early warning system indicating areas of potential ecological conflicts; and to work out proposals for preventing such latent conflicts from escalating into wars, and/or to work out proposals contributing to an effective management of existing violent conflicts. This home page provides an overview of ENCOP, including a complete listing of the Project's publications, with several of its Occasional Papers available on-line in full text. The site also provides useful links to other relevant resources on the Internet.

5. Demographic, Environmental, and Security Issues (DESIP)

http://www.igc.org/desip/

The purpose of DESIP is to emphasize the connection between rising population pressures, environmental degradation and political and violent conflict. DESIP presents a list of the world's wars and trouble spots and related information. The site also provides links to related sites and, in its *FOCUS* section, information and analysis on key topics such as population, environment and security. The site includes the newsletter-style *Addendum*, an on-line source of articles and updates of on-going conflicts from around the world, with special attention to the environmental and population aspects of those conflicts.

6. Peace and Conflict Studies Program at the University of Toronto

http://www.library.utoronto.ca/www/pcs/pcs.htm

This home page for the University of Toronto's Peace and Conflict Studies Program contains links to two of its projects related to environmental conflict. The *Project on Environment, Population and Security* sought to determine if scarcities of renewable resources are decreasing the capabilities of governments in the developing world and, if so, whether this raises the probability of widespread civil violence. The webpage contains a project description, key findings and research results including the full text of case studies from China, Indonesia and India. The *Project on Environmental Change and Acute Conflict* explored the causal linkages among population growth, renewable resource scarcities, migration and violent conflict. The webpage is similarly organized and includes the full text of thematic papers and case studies from Mexico, Gaza, Pakistan, Rwanda and South Africa. Other papers generated by these projects can be found by following the link *Publications on the Web*. Also available on-line is the *Environmental Security Database*, a searchable collection of approximately 20 000 items relating to the study of the relationship between environmental stress and violent conflict in developing countries.

7. RESOLVE- Center for Environmental and Public Policy Dispute Resolution

http://www.resolv.org/

RESOLVE, Inc. is a Washington, DC based non-profit organization specializing in environmental dispute resolution, environmental mediation, consensus-building, facilitation, conflict resolution and policy dialogue. The site includes the following sections: *Resources,* with full-text case studies and articles, an extensive bibliography on dispute resolution and related concepts, and links to other web resources; *Ask a Mediator*, an on-line advice service where visitors can ask a professional mediator questions related to consensus-building or mediation; and *Consensus-Building*, a section which provides general information about consensus-building, including definitions, stages in the process, principles, and a description of what a mediator does and the tools a mediator uses.

8. Institute for Dispute Resolution

http://dispute.resolution.uvic.ca/

The Institute for Dispute Resolution (IDR) at the University of Victoria, British Columbia, is an interdisciplinary centre focused on effective dispute resolution and alternative dispute resolution (ADR) theory and practice. The site includes the following sections: Activities and Current Initiatives; Research History of the Institute; Annotations of IDR Publications; and IDR`s Newsletter *Working Together.* The site also includes

Readings in Dispute Resolution: A Partial Bibliography, which can be found at http://dispute.resolution.uvic.ca/bibintro.html

9. Initiative on Conflict Resolution and Ethnicity (INCORE)

http://www.incore.ulst.ac.uk/about/index.html

INCORE undertakes, commissions and supervises research of a multi-disciplinary nature under the following themes: Policy, Methodology and Evaluation; Post-Violence Conflict Resolution Processes; and The Management of Divided Societies. The Conflict Data Service (CDS) is an automatic entry point to an information network in the field of Conflict Resolution and Ethnicity, providing quick and user-friendly access to quality information. The targeted audience includes: policy makers, especially in the UN system and in the UN peacemaking and peace-keeping community; mediation practitioners in conflict areas; academics working in countries experiencing ethnic conflict, especially in developing countries, and the media. The CDS also offers an extensive Information Bank, which acts as a host to information on the various Academic Programs and Training Programs in the field, the Organisations and Institutes concerned with the issues relating to conflict and ethnicity, and a more General Guide to the subject. Additional resources include a Bibliographic Database, and a Researcher Database.

10. Practitioners Guide for Conflict Prevention and Mitigation

http://www.caii-dc.com/ghai/

The heart of this web site is the Practitioner's Guide to Conflict Prevention and Mitigation. The guide is intended for policy-makers and practitioners at all levels, and represents a recently-assembled body of knowledge on the origins and life cycle of conflicts, an array of tools for conflict prevention and mitigation, and a set of strategies for applying those tools effectively. The guide aims to: discuss the causes of violent conflict; examine the nature and ingredients of violent conflict; describe the processes and stages through which violent conflicts escalate; compile a list of 90 policy tools that third parties and national actors have used to prevent and mitigate conflicts; profile 25 policy tools in depth, and illustrate their usage with case studies from within and outside of the Greater Horn region. The site also includes an on-line discussion forum called *Conflict Prevention and Mitigation.*

Discussion Groups

11. Environmental Dispute Resolution

listproc@gmu.edu

Sponsored by George Mason University's Environmental Conflict Working Group (ECWG), this list provides a forum for those interested in environmental dispute resolution to plan activities and discuss issues related to EDR. To subscribe, please email the above address, with only the following in the body of the message: SUBSCRIBE EDR YourName, replacing "YourName" with your actual name.

12. Int-Conflict-Studies

mailbase@mailbase.ac.uk

This list deals with theories and cases of international conflicts—especially those involving the use of violence. The conflicts may be 'internationalised' conflicts—domestic conflicts with international spillover effects. Theoretical and empirical discussions are equally acceptable. Connection details: email the above address, with message: join int-conflict-studies your name

13. Diversity-Forum

subscribe-diversity-forum@telelists.com

Discussion list on social diversity issues (e.g. ethnic, cultural issues). Sponsored by the USA National Association for Diversity Management. Connection details: send blank email to above email address. An archive of past discussions can be found on the web at http://www.nadm.org/div_for.html

14. Revs (Racial-Religious-Ethnic-Nationalist Violence Studies)

listproc@csf.colorado.edu

Discussion list on current and historical aspects of collective violence based in religious-racial-ethnic discrimination. Includes news and information, research and theoretical comments. Connection details: email the above address, with message subscribe revs

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Stakeholder analysis for natural resource management in developing countries

Some practical guidelines for making management more participatory and effective

Robin Grimble and Man-Kwun Chan

The purpose of this paper is to share our ideas and experience of developing and applying stakeholder analysis to natural resource management, and to stimulate further development of its concepts and methodologies. Stakeholder analysis emerged in response to the perceived deficiency of conventional economic and social approaches for assessing and designing projects and policies. It is emphasized, however, that it is intended to complement rather than replace existing methods. The paper sets out the principles of stakeholder analysis (SA) and provides indicative guidelines for conducting SA in different situations. SA is an approach and procedure for gaining an understanding of a system by means of identifying the key actors or stakeholders in the system, and assessing their respective economic interests in that system. It is shown to have particular advantages for getting to the heart of many natural resource problems and for understanding the conflicts of interest and trade offs that may threaten the success of a project or policy. The paper discusses the origins of SA, the contexts of its application, how one goes about it, and quotes examples from northern Thailand.

The guidelines elaborated in this paper are drawn from lessons learnt in our experience applying the concepts and analytical approach developed through research by R Grimble and J Quan (forthcoming) in a number of situations on the ground. The basic hypotheses of this research were conceived while undertaking consultancies in forest management in India and Cameroon, where preliminary methods were identified. Research for validating and developing the stakeholder approach in relation to natural resource management issues has since taken place in two case study areas in Thailand. One case study in the northern part of the country was a general study of changes in tree resource use and management in a protected forest area, while the other study in the north-east looked at the impact on various stakeholders of establishing a national park. At the time of writing, a case study in Indonesia had been initiated: the focus there is on developing strategies of involving local communities in the management of a wetlands conservation area.

Our interest in stakeholder analysis (SA) stems from the concern that many policies and projects in the past have not met their stated objectives because the consequences of the policy are perceived to be adverse by one or more stakeholder group, and therefore lead to non-cooperation or even open opposition by those stakeholders. Moreover, many policies and projects that have been perceived to be successful have achieved their success only at the expense of certain stakeholder

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groups, in particular local people. Ways of better anticipating and dealing with stakeholder opposition and conflict, and better incorporating various stakeholder interests, are therefore seen to be crucial for improving policy design and implementation. We believe that incorporating some form of SA into the policy making or project design process should be a critical component of this effort. Use of SA would allow policy makers to base their decisions on a real understanding of how different stakeholders might benefit or lose from the policy or project, to highlight potential problems that could be expected to threaten the success of (or add support to) a project, and to focus on ways of minimizing these potential problems and conflicts of interest.

This paper aims to share the ideas and lessons drawn from our experience of applying SA to natural resource management, and equally important, to stimulate development of the methodologies (and concepts) of SA. We therefore emphasize that this paper is by no means intended to provide a definitive approach and set of procedures for SA. On the contrary, it should be treated as a starting point for further development of SA in a range of practical applications, both through further research on our part and, we hope, through the interest and efforts of others.

What is SA?

A general definition of SA might be as follows: it is an approach and procedure for gaining an understanding of a system by means of identifying the key actors or stakeholders in the system, and assessing their respective interests in that system. By 'stakeholders' is meant all those who affect, and/or are affected by, the policies, decisions and actions of the system; they can be individuals, communities, social groups or institutions of any size, aggregation or level in society. The term thus includes policy makers, planners and administrators in government and other organizations, as well as commercial and subsistence user groups.

In the specific context of this paper, SA is considered as an analytical tool for policy makers dealing with practical natural resource management issues, as well as a more general analytical framework for better understanding the use and management of natural resources. Although the principles discussed here may be applicable to a developed country situation, the approach has been developed especially in relation to developing countries and to environmental problems. In this context, then, the overall objective of SA is to improve our understanding of, and design better projects and policies for, natural resource and land-use management. This is to be achieved by explicit recognition of stakeholder groups and their differing sets of objectives, interests and circumstances, and by taking these fully into account in development and conservation planning. SA aims to improve projects and policies in two key senses:

- To improve the effectiveness of policies and projects on the ground, by explicitly considering stakeholders' interests and challenges they may present to the policy/project, identifying and dealing with conflicts (before they arise) over natural resources between stakeholder groups, and giving early consideration to ways of building on commonalities and complementarities of interest and possibilities for cooperation and compromise.
- To better address the distributional and social impacts of policies and projects. This will be achieved by breaking down the analysis to assess separately the interests of, and impacts of intervention on, different stakeholders. The explicit consideration of trade offs between different policy objectives and priorities (in particular between environmental, economic and equity considerations) will also be emphasized in this context.

The origins of SA

Although the concept of stakeholders and the interest in SA have taken hold in the field of natural resource management only in the last two or three years, stakeholder approaches and supporting methodologies in the field of management science had already been established by the beginning of the 1980s (see Mason and Mitroff, 1981; Mitroff, 1983; Freeman, 1984).

The stakeholder approach emerged in response to the felt need for business management to deal with the increasingly complex social systems in which modern corporations have to operate. In the words of Carroll (1989), the modern business organization has evolved to the extent that 'what was once viewed as a specialized means of providing profit through the manufacture and distribution of goods and services has become a multipurpose social institution that many people and groups depend on for their livelihoods and prosperity'.

The essence of the stakeholder approach in business management science is therefore the expansion of the traditional narrow view of the firm, where only those individuals or groups who supplied resources or bought products were viewed as important stakeholders, into a much broader view where a whole range of indirect as well as direct stakeholders are recognized as affecting and being affected by the actions and policies of the firm (Carroll, 1989). The fact that the term 'stakeholder' grew out of the much more restricted idea of 'stockholder' perhaps symbolizes this point.

The fundamental rationale behind SA – the need to recognize and better deal with the wide range of stakeholders that can affect or be affected by the actions and

policies of policy makers – is therefore shared by business and natural resource management concerns. Of course, its application in these very different contexts is at odds in many important respects. Nevertheless, the authors feel that in the development of the approach in relation to natural resource management, lessons can be learnt from some of the principles and methodologies in management science.

Rationale for using SA in natural resource management

The application and development of SA to address environmental management issues can be justified in two main ways. SA can be justified on the basis of the limitations and weaknesses of conventional methods used in policy and project assessment and design in dealing with stakeholder interests. Our approach is therefore proposed as a means of strengthening policy making and assessment procedures by complementing existing methods. The application of SA to natural resource management can also be justified in terms of why it is particularly relevant to natural resource and environmental issues, as opposed to other issues. Both of these rationales are discussed below.

Reasons for failure of natural resource management in the past

One basic starting point of SA is the perceived inadequacy of conventional economic methods of evaluating environmental management projects and policies in assessing the 'implementability' of strategies on the ground, as well as their 'distributional' impacts.[1] By 'conventional methods' we are referring to the various forms of cost–benefit analysis (CBA), including techniques for environmental valuation and assessment based on CBA that have been developed by environmental economists in recent years, such as the measurement of total economic value (TEV) (eg Pearce *et al*, 1989; Dixon *et al*, 1988; Dixon and Sherman, 1990; Winpenny, 1991). By focusing on measuring costs and benefits of a project/policy/protected area to society as a whole, these approaches do not adequately consider the distribution of costs and benefits among different stakeholders, or the winners and losers. More important, they ignore the fact that different stakeholders are unlikely to perceive the same environmental problems, so that they will seek different solutions and use differing criteria for assessing the desirability or worth of a given intervention. As a consequence, CBA and similar economic methods overlook the fact that projects/policies often fail owing to opposition or non-cooperation of certain stakeholders who perceive that their interests have not been served.

The role of SA is therefore to fill this gap by providing an approach that starts off with the differing interests of the various stakeholders. SA is intended to complement and build on these conventional economic approaches, but give greater attention to private costs and benefits, as they are perceived by decision makers at various levels.

Our development of SA also responds to the increased interest, application and development of 'participatory methods' for data collection, analysis and project design/management in the last decade or so (eg Khon Kaen University, 1988; Farrington and Martin, 1988; Cernea, 1991; International Institute for Environment and Development (IIED), 1988–94). These include participatory rural appraisal (PRA) and a range of similar techniques (Pretty and Chambers, 1993), social forestry (Shepherd, 1990; Inglis, 1992; IIED, 1994) and participatory land-use planning approaches such as that developed by various collaborating institutions in northern Thailand (Conway, 1986; Tan-Kim-Yong, 1992).

SA is related to participatory methods in many ways, sharing important goals such as ensuring that the interests of disadvantaged and less powerful groups are better articulated and addressed. Moreover, many of the techniques for data collection developed and used in participatory and rapid rural appraisal (PRA and RRA) can and have been usefully applied to SA. However, the development of SA is based on the contention that increasing the participation of 'beneficiaries' or target groups alone cannot guarantee that projects will work. For projects to work, the interests of the whole range of stakeholders who can influence or be influenced by the project or policy need to be taken into account, and compromises need to be actively sought between 'public' objectives and potentially conflicting 'private' stakeholder interests and objectives. While encouraging the participation of the range of stakeholders in co-operative decision making and management may be one way of doing this, participatory methods *per se* cannot guarantee success.[2]

One final point needs to be made in this section. In the last couple of years, the use of the term 'stakeholder' and the recognition of the need for some kind of SA has been emerging in various development and natural

[1]Many policies and projects have not achieved their desired environmental or ecological ends (though the underlying reasons for this have often been unclear to decision makers). Also, when success has been achieved (or claimed), it has not benefited all groups in society; indeed, achievements have often been at the expense of vulnerable groups in local communities.

[2]Participatory approaches in natural resource management have made strides in developing procedures for community or joint involvement but have generally given less emphasis to dealing with inherent structural problems and the factors giving rise to conflict of interest.

resource management circles. For example, a learning group at the World Bank has recently been set up to work on the concept of 'stakeholder participation' and its incorporation into Bank activities and procedures (World Bank, 1994). However, the need remains for the development of methodologies for systematically considering and incorporating stakeholder interests in analysis and policy making, and for linking these methods with both participatory and macroeconomic approaches. This is the gap that our research and this paper aim to fill.

SA is particularly relevant for application to natural resource management and environmental issues

Although we feel that a stakeholder approach can be usefully applied to a wide range of areas in development as a whole, there are several distinctive characteristics of natural resource management that make SA particularly relevant to its analysis. Some of these factors are considered below:

- Environmental problems or issues (eg management of soil and water regimes) are bounded by natural/physical systems, such as watersheds, and these cut across social, economic and political units. Thus for a given environmental problem, a large number of different stakeholders – different local communities, commercial interests, and a range of government departments and offices at local, regional and national levels – are likely to be involved.
- Environmental impacts also tend to be wide-ranging, often affecting a whole watershed, region, nation or even the whole planet. Environmental problems are therefore frequently associated with the prevalence of externalities, where the costs (and sometimes the benefits) are predominantly borne by others rather than the decision maker in question. The existence of externalities means that natural resource management issues are characterized by competing interests and the system must be viewed holistically, with an understanding of the gains and losses of all stakeholders using, managing or affected by the resource.
- Many natural resources are not owned or managed privately but are rather common or public resources. Methods of control and management, and ease of access to the resource, vary enormously between locations but typically there are multiple users acting competitively and numerous stakeholders. Owing to factors such as institutional complexity and the high costs of excluding non-members from use of the resource, management is often characterized by inefficiency and non-sustainability.
- Another characteristic of natural resources is that appropriation of the resource adversely affects future availability or production. This is true of both renewable and non-renewable resources, and applies to, say, grazing and forest resources as much as to groundwater. Thus temporal trade offs occur (giving rise to issues such as the rate at which the resource should be used, and the level of investment that should be made in management/conservation), as well as trade offs between more or less subtractive uses of the resource.
- Natural resources tend to have multiple uses, which are often not compatible. For example, forests and tree resources may have both productive and environmental benefits which are utilized by different sets of people; the timber of certain species may be required by a logging company, non-timber products by local people, the land on which the forest is found may be coveted by settlers, and environmental protection may occur both on and off site. The question of which trade offs need to be made between different uses (commercial, subsistence and environmental) and users is therefore often a fundamental issue (Grimble and Quan, forthcoming; and Grimble *et al*, 1994).

When is SA required?

While we feel that a consideration of the interests of different stakeholders is useful in almost all policy making and project design contexts, SA will of course be more relevant and critical in some cases than others. Policy makers or fundholders at all levels will only allocate time and resources for carrying out a full SA if it is seen to be essential. Given this, several key or primary conditions where a SA is likely to be particularly crucial have been identified below. These primary conditions could be used as the basis for selecting or screening projects, policies and situations for conducting a SA.

SA is likely to be particularly relevant where the following exist:

- Externalities: for example, where downstream users of a river are affected by the use and pollution of the water upstream. It should be remembered, however, that not all externalities are negative; soil eroded from upland slopes, for example, may replenish the fertility of fields below in addition to silting up dams and clogging vulnerable irrigation systems.
- Unclear or open property rights (usufruct or ownership rights) to the resource in question: SA is more applicable to situations where resources

(eg forests, irrigation systems) are managed as common property rather than when resources are privately owned, particularly where traditional institutions regulating communal use and management are breaking down; and where resources are officially owned by the state but function in practice as *de facto* open access resources.

- Different levels of stakeholders with distinct interests and agendas. These include macro and micro interests and range from government departments, environmental pressure groups and commercial interests to local farmers. In such contexts, not only the interests in natural resources but also the cognitive frameworks (knowledge base, decision making criteria etc) and economic circumstances will vary considerably between stakeholders. SA would be particularly valuable in these conditions, as opposed to situations where competition may exist over use of a resource but the main stakeholders share similar interests and are fairly homogeneous (eg many small local farmers competing for the use of local forest products on communal land).
- Trade offs that need to be made at the policy level over the use and management of resources: for example, where national policy objectives encourage conservation of forests, but local people are primarily interested in clearing forest land for agriculture or other land uses.

What are the different contexts in which SA can be applied?

The principles of SA can be potentially and usefully applied to understanding and assessing natural resource management issues in a variety of contexts. The application of SA across these different contexts will, of course, need to be adapted accordingly, in terms of the focus of investigation and specific techniques of information gathering and analysis employed. Nevertheless, it is felt that a core methodology can form the basis for the range of different possible applications: it is this core methodology that these guidelines wish to provide.

Different institutional levels

The emphasis of SA, as stated above, is to provide an analytical tool directly useful to policy makers and planners. However, policy is made and administered at many different levels, ranging from international environmental conventions, through national and regional natural resource management policy, right down to the level of designing and managing village-level community forestry and rangeland projects, water sharing schemes and the like. It is argued here that SA can be a useful tool to policy makers at each of these different levels.

National policy analysis. For example, when a national government wishes to establish environmental policy and legislation to be applied across sectors, SA could be used to draw out the different sectoral interests in relation to natural resources and environmental management. This would provide an essential basis from which could be built a policy that is both feasible and acceptable across government sectors.

Regional or local planning. For example, SA should be particularly useful in analysing and helping provide management/policy options in situations where the objectives and methods of national and regional governments interact and (appear to) conflict with the interests of local (primary) stakeholders.

Project analysis. For example, SA would be applicable in the design or appraisal of local projects where the activities of the project are likely to affect several distinct local stakeholder groups with significant differences in interest (in relation to the project). These groups may be, for example, different villages, different ethnic communities, livestock herders *vis-à-vis* sedentary agriculturalists, and possibly men and women.

Different purposes

SA can be used for the following:

- *ex ante* appraisal of projects and policies;
- *ex post* evaluation of projects and policies;
- general research on natural resource management and change, designed to increase understanding of general issues related to conservation and degradation;
- analytical support to an on-going process of conflict resolution and cooperative management of a resource, eg village common property management.

How does one go about it?

As discussed above, SA can be used for different purposes and in different contexts, and therefore the procedures and techniques of data collection and analysis will need to adapt to particular circumstances. Nevertheless, it is possible and useful to outline some principal steps of enquiry for carrying out SA that form the basis for application in different contexts. More specific examples are given to illustrate some of the general principles and steps for information gathering and interpretation. However, it should be stressed that this is a flexible set of guidelines put forward for development

rather than a definitive manual for SA that can be used rigidly in every situation.

Identify the main purpose of the analysis

A clear idea of the main objectives is important for any type of analysis or assessment process, but it is perhaps particularly crucial for SA because the wide range of possible applications demand significantly different procedures and methods of enquiry, as will be indicated below.

The initial stage of the research or analysis should involve drawing up working definitions and guidelines concerning the following questions:

- What is the problem that needs to be addressed?
- What are the objectives and intended outputs of the analysis?
- Who are the relevant decision makers?
- How will the outputs be targeted?

These will then form the basis for building an analytical framework on which further enquiry will be based.

In the case of an *ex ante* appraisal of a project, for example, the problem might be the concern that the project in its proposed form will have adverse distributional impacts on some groups of people and will meet with local opposition. The objectives and outputs would then be to provide alternative project designs or management strategies that have a more acceptable impact. In this case, the project managers are likely to be the main target group, and their needs might be targeted by ensuring their systematic contribution to the analytical process.

For a research project, the problem might be the occurrence of rapid destruction and degradation of a forest area, the underlying causes of which are unclear. The main objectives of the research would then be to gain a better understanding of how the various stakeholders involved in forest use and management are contributing to this degradation. In most cases research is concerned with improving objective understanding and analysis of an issue and specific policy makers are less likely to be directly targeted.

Develop an understanding of the system and its decision makers

SA was described above as an approach and procedure for gaining an understanding of a system by identifying the key actors in the system, and assessing their respective interests. Once the purpose has been established, the starting point for analysis is getting a holistic understanding of how the overall system operates, who are the main decision makers in the system, and what drives decision making within it.

Systems can be viewed at different levels and as a hierarchy of subsystems. At an early stage of analysis it is important to get an overall perspective, and fill in the details only as time proceeds. What is perhaps most interesting about natural resource systems is their interactions and interdependencies, which can be viewed as interdependent ecological and socio-economic systems. An Indian forest, an ecological unit in itself, for example, may provide the economic basis for indigenous forest dwellers, livestock keepers and forest fringe farmers. The latter may graze their livestock in the forest and gather lopped branches, leaves and fodder for carrying to the farm for use as feed and bedding. The manure and compost may later be carried to the fields for the maintenance of nutrients and organic matter in arable farming. The livestock in turn will feed off residual crop material and fertilize (dung) the land or the forest.

Where the problem is one of land degradation or deforestation, it is necessary to understand where the system is breaking down, what are the immediate and underlying reasons, and who are the decision makers. The starting point for understanding is an acceptance of the rationality of decision makers at all levels, whose behaviour can be predicted given enough knowledge of their particular circumstances. While the immediate causes of degradation may be obvious, understanding the underlying factors may require a deeper understanding of stakeholder interactions.

Identify principal stakeholders

Table 1 gives an example of potential stakeholders that might be identified in relation to tree resource management at different institutional levels.

The process of identifying relevant stakeholders and deciding which stakeholders should be included or omitted in the full analysis needs to be carefully considered at an early stage because the selection critically influences the analysis. It is useful to apply more than one criterion or procedure for the initial identification of stakeholders in order to ensure that all relevant types are considered. According to the purpose and context of the analysis, different criteria will be of greater or lesser relevance.

Certain techniques and principles developed in management science, as well as information gathering techniques used in micro-level development research such as participatory and rapid rural appraisal (PRA and RRA), have the potential to be usefully adapted and applied to the context of SA in natural resource management. We here concentrate on management science because it has not to our knowledge been applied to SA in natural resource management and the literature is thus less readily available. In the management literature, seven principal methods or approaches to aid policy makers in uncovering relevant stakeholders have been

Table 1 Stakeholders of tree resources, ranging from macro to micro level (an example)

Institutional level	Example stakeholders	Environmental interest
Global and international; wider society	International agencies; foreign governments; environmental lobbies; future generations	Biodiversity conservation; climatic regulation; maintenance of resource base
National	National governments; macro planners; urban pressure groups; NGOs	Timber extraction; tourism development; resource and catchment protection
Regional	Forest departments; regional authorities; downstream communities	Forest productivity; water supply protection; soil depletion and siltation
Local off site	Downstream communities; logging companies and sawmills; local officials	Protected water supply; access to timber supply; conflict avoidance
Local on site	Forest dwellers; forest fringe farmers; livestock keepers; cottage industry	Land for cultivation; timber and non-timber; forest products; access to grazing and fodder; cultural sites

developed (Mason and Mitroff, 1981; Mitroff, 1983). Three of these approaches appear to be particularly applicable to natural resource management issues:

The 'reputational' approach entails asking knowledgeable or important individuals to identify those groups they believe have a stake in the issue in question. An example which is often used in social field research is to ask the village headman or elder to identify the different stakeholders within a village, such as distinct ethnic or caste communities, economic divisions, the importance of gender divisions etc.

The 'focal group' approach starts by identifying a stakeholder group which plays a central or pivotal role in the system in question. Other stakeholders are then uncovered by identifying individuals, groups and institutions who have important relationships with the focal group with respect to the natural resource management issue in question. The focal group might be a local village where *in situ* stakeholder(s) are likely to interact with a wide range of stakeholders – from other villages, social groups and various local officials from different government departments.

The 'demographic' approach can be used to complement other approaches, providing a general, systematic way of ensuring that all common social groupings are considered. It can identify stakeholders by a set of standardized characteristics such as gender, age, occupation, religion etc. As far as possible some of these groupings will subsequently be eliminated if differences in interest between them are seen to be insignificant.

After an initial set of stakeholders has been identified, all need to be verified. This might be achieved by questioning the stakeholders as to whom they perceive the other main stakeholders to be, and what the relations between different stakeholders are. This process will help not only to test our initial list of stakeholders, but also to gain an idea of their interests in the issue in question.

After the initial process of identifying stakeholders, the list of stakeholders needs to be streamlined so that only those who are essential to the analysis in question are included. It would appear that two considerations are particularly crucial in the selection process and therefore need to be explicitly addressed. In the first place, a balance needs to be achieved between ensuring that important stakeholders are not omitted, but at the same time restricting the number of stakeholders included in order to keep the analysis as simple and manageable as possible. Of course, the balance is a delicate one that will depend on the purpose of the particular enquiry: if SA is being used to increase general understanding of a natural resource management issue, then the inclusion of a more comprehensive and detailed list of stakeholder groups may be appropriate. On the other hand, where a more specific problem is being investigated, such as an *ex ante* appraisal of the likely impact and effectiveness of a project, a more selective inclusion only of those groups whose cooperation is crucial to the success of the project may be applicable.

It was stated earlier that SA can be used both to improve the effectiveness of policies and projects and also to address their social and distributional impacts. The two objectives demand rather different selection criteria for stakeholders. If the main interest is in overall environmental or economic effectiveness (will the project work?), the primary consideration for selecting stakeholders will be the inclusion of those groups whose interests, resources, and position of power/authority imply that they are likely to affect substantially the way in which the project or policy will operate or fail to operate in practice. If, however, there is equal or greater concern for the equitable distribution of benefits and costs, the selection criteria will be based on considering all those groups who in some way will be affected by implementation, ie those who have interests, claims or

rights (ethical or legal) to the benefits of the project or policy, or to some measure are likely to bear its costs or adverse impacts whatever its overall worth. Again, the balance between equity and effectiveness in influencing the selection of stakeholders will need to be determined individually in each different context. These are issues that should be fundamental to any environmental impact assessment (EIA) or social impact assessment.

Although the identification and selection of stakeholders is required at this early (chronological) stage in order to allow the rest of the analysis to proceed, it is emphasized that the procedure is a process rather than a series of events, and the verification and possible revision of the list of groups included should be kept in mind throughout the analysis. New information acquired may reveal previously hidden stakeholders, or may show that a particular stakeholder is less significant than originally assumed. In this case the list of stakeholders should be revised accordingly.

Investigate stakeholder interests, characteristics and circumstances

After having identified the set of stakeholders to be investigated, the strategies for data collection and analysis for the various stakeholders need to be determined. Effective strategies are likely to vary considerably between different types of stakeholders. Not only will they have very different sets of interests (see Table 1), but there will also be variation in the kinds of political, socioeconomic and environmental contexts or circumstances in which these interests operate, and in the cognitive frameworks in which stakeholders develop and perceive their interests.

Techniques for data collection and analysis for natural resource management at village level developed rapidly in the last two decades, and there is now a much better understanding of rural people's management and use of resources, eg livestock and tree resources. In the 1990s PRA (as opposed to RRA) methods have been developed not to extract information but to motivate, enhance and empower people. Cernea has said that participation is about 'empowering local people to ... manage their resources, make decisions, and control the activities that affect their lives' (Cernea, 1991), and Inglis has recently classified participatory approaches into three types, passive, interactive and dynamic, with the implication that only the dynamic is truly participatory (Inglis, 1994).

The present paper, while participatory at heart, is aimed at developing frameworks and methodologies for policy makers and planners which indirectly rather than directly involve local people. The method the paper proposes should lead to more directly participatory approaches in the implementation of environmental and developmental planning. Our field experience to date points in particular to the usefulness of informal, semi-structured interviews (using simple checklists of key topics), both with individuals representing one stakeholder group, or with a number of representatives from different stakeholder groups. Oral case histories have also helped understand changes over time and the dynamics of the system. Quantitative as well as qualitative techniques of data collection and analysis can with care be fruitfully used, for example, using cash incomes from selling forest products as a partial indicator of dependence on a forest resource, or using preference ranking for determining the perceived value to stakeholders of different types of trees. These and other techniques and their application have been expounded elsewhere and therefore are not discussed in detail here.[3]

In contrast, the authors feel that methods and techniques for eliciting the interests of macro-level stakeholders are less advanced. There is thus the need to develop such methods, in particular with respect to bringing out the interests and agendas (hidden as well as overt) of government officials and large commercial organizations who have a stake in natural resource management. It is thought that political science and administration may have much to contribute in this arena.

As the key areas of investigation will differ in varying contexts, it is not possible to produce a definitive set of key questions for analysis. Nevertheless, some sample questions which could be used to structure an investigation in specific contexts are presented below.

Key questions for local stakeholders in background research on use and management of a natural resource

- Question each stakeholder group about how they themselves use and manage the resource in question. What direct goods and services do they extract from the resource? What indirect (including environmental) goods and services do they provide? What restrictions do they face over the use of the resource? What *de jure* and *de facto* rights. or claims do they have over using and managing the resource? What are the forms and degree of management of the resource in question?
- In addition to direct questioning of stakeholders, indirect investigation provides information, through the observation of stakeholders' actions and behaviour, or evidence of this behaviour. Their

[3]Both economic and social approaches may fail to address inherent policy trade offs, particularly between environmental, economic and equity objectives. SA complements and builds on existing approaches; it cannot, of course, provide instant or complete solutions to fundamental problems but it can make them explicit, and draw out and help get to the bottom of a problem.

de facto practices may for a number of reasons be rather different from their interests expressed to the researcher.

- Each stakeholder is also asked about his/her views on other stakeholders' use of the resource, and how he or she interacts with other stakeholders over the use and management of that resource. This process might be seen as involving a series of individual stakeholder analyses – analyses from the viewpoint of each stakeholder (Biggs and Sumberg, 1994). This step helps to achieve two purposes: (i) cross-checking, eg a group might not mention its own involvement in illegal activities, but may be willing to talk about the illegal activities of other groups; and (ii) (preliminary) identification of any common ground (Biggs and Sumberg, 1994), cooperation, competition and conflict between stakeholders over the use and/or management of the resource.
- What trade offs are stakeholders making and what decision making criteria are they using when they choose a particular management or resource-use strategy? What are the actual and perceived costs and benefits to stakeholders of following their chosen behaviour or actions? Do they perceive any external costs and benefits of their actions and decisions and, if so, are these considered in their decision making? This information could be gained by asking about alternative uses of the resource, and discussing different situations in the past or hypothetical situations in the future where certain variables are changed, eg the market price of a resource product or availability of labour.
- Finally, it is useful to question stakeholders regarding their system boundary and decision making frame. For example, it is important to understand what stakeholders see as their decision making environment, what factors they perceive as lying within their control and what lie outside it (endogenous and exogenous). These systems and their boundaries would form the basis of any modelling that might subsequently be required.

Key questions for an ex ante *appraisal of a project*

Many of the questions above would also be useful for an *ex ante* appraisal. However, particular emphasis would need to be given to discovering different stakeholders' views on the following:

- What do they know about the project, the accuracy of this understanding, and what don't they know?
- What general improvements to the management of the resource in question would they like to see? This question has to be qualified by the knowledge that, however sophisticated village people may be, their level of experience is unlikely to enable them to foresee all the likely changes that the project will bring about.
- What do they think about the proposed management solution offered by the project? What are the actual and perceived costs and benefits to the stakeholder, including the opportunity cost of benefits forgone? Is the distribution of costs and benefits deemed to be fair? Who is seen to win, and who to lose?
- How could the proposals be improved (from the stakeholder's viewpoint)? What would he/she be willing to pay or sacrifice for these improvements (labour, income, compromise with other stakeholders)?

Identify patterns and contexts of interaction between stakeholders

An overall understanding of the system and its interactions should have been obtained early in the fact finding process, and the uncovering of conflicts and cooperative action will probably have taken place either then or in the course of the last two stages of analysis. However, an explicit investigation of relationships and interactions between stakeholders may reveal more about the nature of the conflicts and cooperative action, and the reasons and contexts behind them.

One useful way of gaining an understanding of conflicts is by discussing a concrete case of past conflict, what gave rise to it, and if and how it was resolved. The use of group meetings or interviews that involve people who represent different stakeholder groups is likely to be a helpful technique, although the success in promoting informative and peaceful discussions will depend on a number of factors, including the existence of intermediaries who are respected and deemed impartial by all the parties involved.

Cooperative or collective management of natural resources, including the institutions, rules and values that govern it, has been fairly widely documented and analysed, particularly in relation to the management of common property or, as some prefer, common pool resources. SA is interested in identifying and understanding the nature of existing kinds of cooperation between different stakeholders, as well as pinpointing opportunities for developing cooperation in the future. Recent literature and theory on common property resources address both these needs, by providing frameworks for analysing cooperative management (eg Oakerson, 1992), and identifying key characteristics on which successful collective action is likely to depend (eg Wade, 1987).

However, the common property resources literature provides little insight on cooperation or conflict where there are a large number of stakeholders with very different interests in the resource: yet SA is aimed in particular at dealing with such complex situations. SA also aims to identify the reasons and contexts behind conflicts and cooperation, both to increase understanding of a specific situation and to be able to draw general lessons about what factors are likely to lead to conflict or successful collective action. Of course, the existence of conflict will usually be associated with competing interests between the groups involved; and similarly, cooperation will be rooted in some kind of shared or complementary interests. However, other factors are likely to affect the likelihood and nature of conflict and cooperative action. A checklist of such factors is presented below, although at this juncture this is particularly tentative and further verification and refinement is required.

- The nature of power and authority relationships between stakeholder groups.
- Sociocultural relationships between groups: many situations of conflict are encouraged or strengthened by ethnic, religious or cultural divisions and consequent ill feeling between the groups.
- Historical contexts: cooperative action between different local communities, or between local communities and government officials, is more likely to occur over a new issue if there has been a history of cooperation over other issues in the past. Conversely, if there is a history of conflict between two stakeholder groups, the emergence of shared interests over a particular issue may not be enough to overcome the conflict.
- Legal institutions: cooperation and cooperative institutions are more likely to exist if there are legal institutions to support them, eg if the legal system officially recognizes community or other collective ownership/management rights to grazing or forest land.

Managing stakeholders and conflicts: options for management

Ultimately, a SA, depending on the context, will usually have to provide answers to a number of questions. Which stakeholders' interests are going to receive priority? How are the interests of all the most influential or powerful stakeholders going to be reasonably met in order to ensure their cooperation? What is the common ground on which compromise between pertinent stakeholders can be based? How are conflicts between stakeholders going to be resolved or controlled? This process of managing stakeholder interests and conflicts has yet to evolve, and the development of appropriate procedures and tools should be a priority area for future research.

At this stage, it is possible to consider only in a general way the types of approaches that can be applied to the management of stakeholder interests and conflicts. Such approaches can be represented along a continuum:

Round table negotiations	*Top-down analysis and resolution*
Conflict resolution reached through initiative of primary stakeholders involved. Outsider plays marginal role, but may mobilize and empower local people, eg participatory land-use planning.	Participation and initiative of primary (local) stakeholders in decision making is minimal. Use of formal analysis eg game theory approaches such as conflict analysis.

Round-table and top-down approaches are not mutually exclusive; on the contrary, a combination of the two types of approach is often the best option. For example, a top-down analysis may be used to determine several feasible options which are then selected and modified through discussion between the different stakeholders involved. Nevertheless, top-down and participatory approaches will be more or less applicable under different circumstances. The pertinent variables might include:

- the political climate;
- the economic philosophy of national and local government;
- the *de jure* and *de facto* systems of ownership and property rights;
- the extent and strength of group identity, organization and institutionalization;
- the extent and nature of previous or typical interaction between the main stakeholder groups involved;
- stakeholders' perceptions towards ownership and responsibility for management.

Discussion

Like all approaches and methods of analysis, SA undoubtedly has certain limitations and weaknesses that should be discussed.

One potential weakness of SA is that it tends to treat different stakeholder groups as distinct entities. In reality, social groupings are generally not distinct and involve overlaps between groups, eg rich farmers and poor farmers. In contexts where SA is primarily being used as an analytical tool by an outsider, the definition

of distinct stakeholder groups is probably less of a problem and more of an analytical advantage. However, in cases where SA is being applied to empower groups of people, or as a tool supporting a practical and participatory effort at conflict resolution between groups, overlaps between defined groupings may prove more problematic. A greater flexibility and awareness of overlaps would be required in these circumstances.

Similarly it should be recognized that stakeholder groups are defined here on the basis of each group having a distinct set of interests that distinguishes it from other groups. This, of course, is only one way of defining groups, and in certain situations it is arguably not the best criterion. For example, the extent of group identity, cohesion and organization may well be more important considerations in some contexts in which SA will be used, for instance where SA is applied as a tool for considering management options for a community-managed water or forestry project. In this case, the strength of group identity and the history of community institutions are possibly more important than the existence of shared interests in determining the success of community management.

It is also recognized that there is an inherent substantive and methodological difficulty in SA as envisaged in this paper. This arises from the fact that SA is aimed specifically at dealing with, analysing and managing sets of stakeholder interests where these are particularly divergent. Yet in such situations there is always the possibility that conflicting interests are based on fundamentally different conceptions of natural resource management issues, and in these cases there may in fact be no conceptual grounds on which they can be compared and/or managed. If there are no common conceptual grounds, then the development of methodological tools for comparison and management also becomes problematic.

While the authors fully accept that this difficulty exists, there remains the fact that, in order to design effective natural resource management policies, the interests of divergent stakeholders – in particular macro- and micro-level stakeholders – must be understood and traded off.

A final point to make here is that, given existing biases in access to information, the act of making more information available about the interests, decision frames and decision making criteria of less powerful groups may play into the hands of the more powerful groups – including those who have advantages in terms of better access to knowledge, or better education. The latter may use this knowledge to manipulate the former in order to further their own interests.

It would be fair to say that the limitations of SA outlined above can be successfully addressed through appropriate use and modification of the principles and procedures.

Conclusions

This paper has sought to set out the principles of SA and to initiate the process of developing procedures and methods for conducting SA in different situations. It has been used and found applicable (although in a raw state) during consultancies in environmentally contrasting areas, including the Himalayan zone of India, the tropical forest in Cameroon, and semi-arid (partially irrigated) areas in north-east Thailand. It has similarly been found useful in situations where land is held and managed by the state, where there are no formal boundaries to ownership but where local rules and institutions hold sway, and where a national park has been established which has recently changed the loci of decision making. It is, however, better developed as an analytical and heuristic tool than as a method for conflict mitigation or resolution.

SA is thus seen to be a useful tool for policy makers and planners working in the area of natural resource management. Its particular advantage is that it provides procedures for getting to the heart of a problem, and for understanding (and getting to grips with) the reasons lying behind a potential or actual conflict of interest that may threaten the success of a project or policy. It does not mean that the analysis will necessarily lead to an easy solution; in some cases, rather, it will lead to the abandonment of a plan as unworkable or insufficiently thought through.

The methods need to be refined for application in differing contexts, and procedures further developed for specific stages of the analysis, in particular for conflict resolution and management. It is hoped this paper has shown that SA is an eclectic approach, drawing concepts and methods from management science, RRA and PRA, common property resource theory, farming systems economics, environmental economics and political economy. The adaptation of the approach to suit different purposes will similarly require inputs from a diverse range of disciplines and experience, including those not traditionally involved, such as business management and political science.

The development of the stakeholder approach emerged in response to the perceived deficiency of conventional approaches for assessing and designing projects and policies. While SA seeks to fill this gap, it is again emphasized that it complements approaches such as cost–benefit analysis. Indeed, where possible, it will utilize such concepts and methods (in a free form), from the viewpoint of different stakeholders and from that of society. Nevertheless, although SA has limited objectives and is not necessarily valuable in all contexts, it is believed that it will be an important aid both to understanding problems and for improving policy and project design in many developmental situations.

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Participatory Methods in Community-based Coastal Resource Management

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Tools and methods

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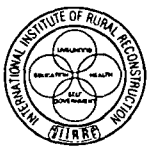

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Stakeholder analysis

Definition

Stakeholder analysis is a method by which people generate insights into the characteristics of individuals and/or groups, and their respective relationship to a particular resource or project. Stakeholder analysis goes beyond the simple identification of stakeholders. It examines the interests of stakeholders vis a vis a particular resource or project and the impact of the activity on the stakeholder.

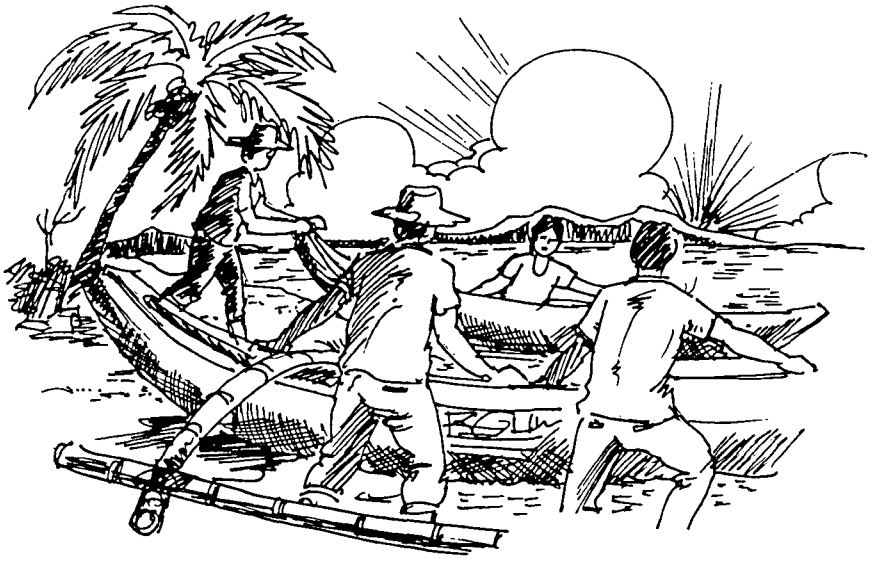
Stakeholder analysis also tries to identify coping strategies to minimize or eliminate negative impacts of activities on stakeholders.

Who are stakeholders?

Stakeholders are individuals, groups or organizations of men and women who are in one way or another interested, involved or affected (positively or negatively) by a particular conservation or development project. They are motivated to take action on the basis of their interests or values.

Stakeholders are important because they can support and sustain a particular resource. They could be potential partners or threats in managing and developing coastal resources.

The fisher community or organization is considered a primary stakeholder of coastal resources. Other examples of stakeholders include government agencies, private/business organizations, non-academic organizations, academic or research institutions, religious/cultural groups and donors.



Stakeholder groups can be divided into smaller and smaller sub-groups depending on the particular purpose for stakeholder analysis. Ultimately, every individual is a stakeholder, but that level of detail is rarely required.

Purpose

- To identify potential partners in managing a particular resource or project.
- To explore possible approaches in relating to a particular person or groups who can be supportive or potentially hostile to a particular undertaking.
- To provide valuable insights into the dynamics and relationships of individuals and groups with various interests in a particular resource or project.

The stakeholder analysis is usually done by key informants from primary stakeholders (i.e., members of the fisher community). The facilitator should be a trained community leader or a person from a non-government organization working in the community.

Requirements

Human resources

- ✓ facilitator
- ✓ key informants

Materials

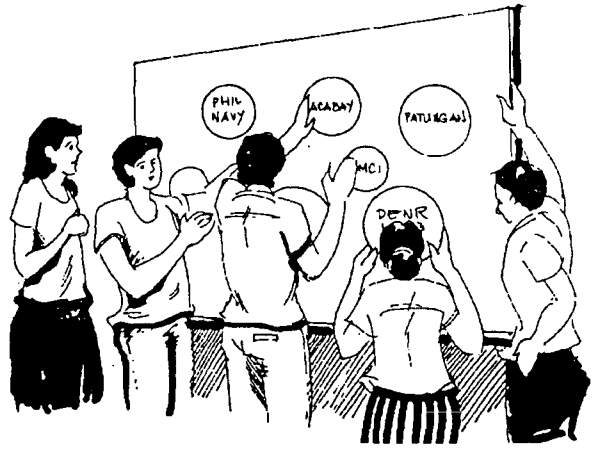
- ✓ manila paper or black board
- ✓ colored paper or cartolina
- ✓ pens
- ✓ metacards
- ✓ masking tape
- ✓ paper circles
- ✓ scissors or cutting blade

Suggested approach

Note

This exercise can be done with participants from a single stakeholder group or with members of various stakeholder groups. It is important to recognize and document the composition of the participants in order to objectively analyze the results.

1. Identify resource, project or activity to be analyzed. The project or activity may be on-going or proposed.
2. Identify and list stakeholders. Write their names on paper circles. Use larger circles for stakeholders with greater influence or power (refer also to topic on venn diagram).



3. Prepare a stakeholder analysis matrix on the board or on a piece of manila paper.

Stakeholder analysis matrix

Proposed action: Enterprise project in national park	Positively affected (+)	Negatively affected (–)
Directly affected		
Indirectly affected		

4. Place the circles in the appropriate square on the stakeholder analysis matrix. There are four possible locations based on the matrix:

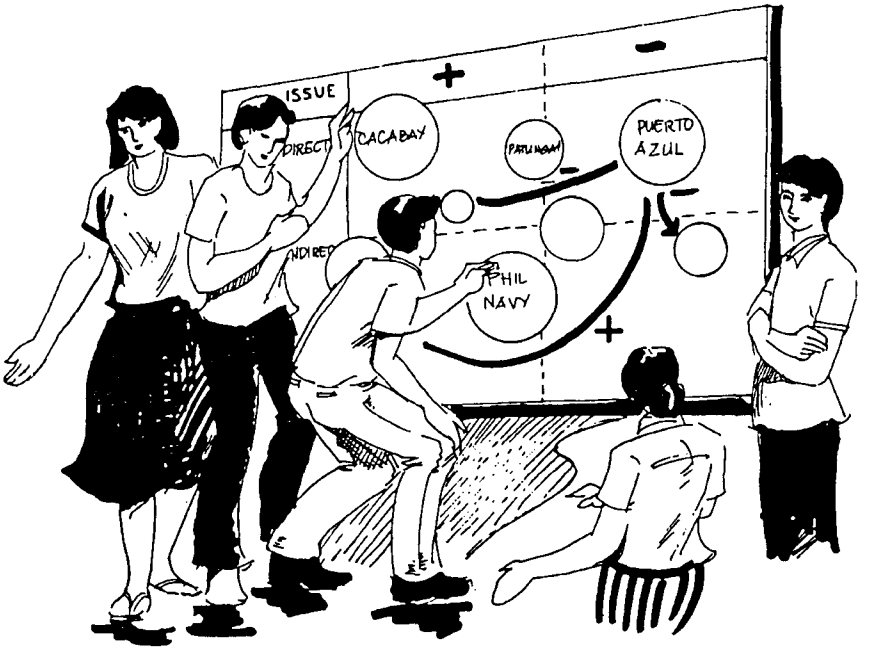
   a. stakeholders that are directly affected in a positive way [direct and (+)];

   b. stakeholders that are directly affected in a negative way [direct and (–)];

   c. stakeholders that are indirectly affected in a positive way [indirect and +]

   d. stakeholders that are indirectly affected in a negative way [indirect and –]

5. Draw lines between the stakeholders to indicate the existence of some form of relationship. Use plus or minus symbols to indicate the nature of the relationship.



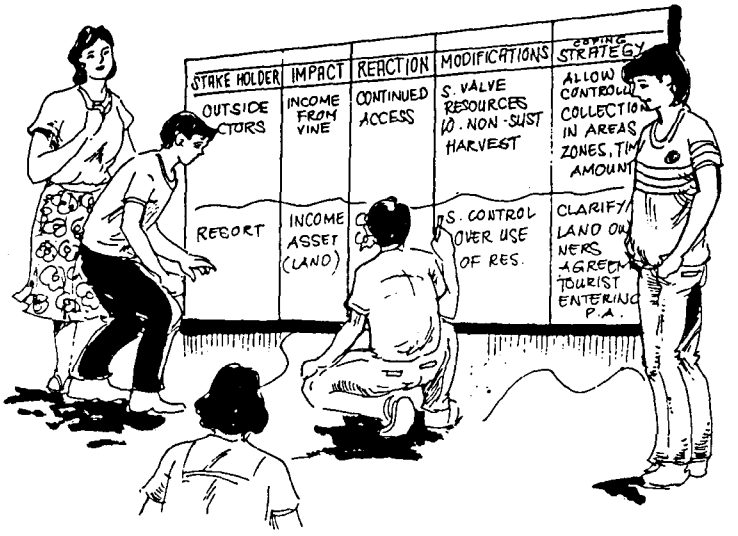
6. Prepare a stakeholder analysis and coping matrix.

Stakeholder group	Describe the impact of the proposed action on the stakeholder group	Describe the potential reaction of the group and the implications for the proposed action	Can the proposed action be modified to reduce or mitigate the negative impact on the stake-holder group?	Describe the recommended course of action (coping strategy)

7. Begin with the stakeholders identified as being directly and negatively affected, then move on to those indirectly and negatively affected. For each of these stakeholder groups, examine the questions found in the analysis and coping matrix:

   - Describe the potential impact of the proposed action on the stakeholder group.
   - Describe the potential reaction of the affected group and the implications for the proposed action.
   - Can the proposed action be modified to reduce or mitigate the negative impact? If so, how?
   - Describe the recommended course of action (coping strategy).

8. Write the information for each column on the metacards (or directly on the board) and place metacards on the appropriate columns.



9. After the participants have filled up the matrices and tables with information, discuss observations, issues/ problems and insights.
10. Formulate strategies or courses of action for addressing various stakeholder interests especially for those negatively affected.
11. Discuss other possible uses of the information derived from the exercise.

Factors affecting the values and characteristics of stakeholders

- Age and sex
- Gender
- Religion
- Political affiliation
- Occupation
- Education
- Familial relationships
- Geographic location
- Length of residency
- Income and social status

Toolbox

The following tools also described in this sourcebook may be of particular relevance to stakeholder analysis: venn diagram, institutional analysis, resource use mapping, key informants.

Outputs

- ★ Data/information on various stakeholders (especially those negatively affected).
- ★ Coping strategies/courses of action which could be used as input into an overall plan of action.

Sample output: Stakeholder analysis and coping matrix

Proposed action: Implementation of a community-based herbal medicine collection and processing enterprise in Coastal National Park

Stakeholder group	Describe the impact of the proposed action on the stakeholder group	Describe the potential reaction of the group and the implications for the proposed action	Can or should the proposed action be modified to reduce or migitate the negative impact on the stakeholder group?	Describe the recommended course of action (i.e., coping strategy)
Resort owners	• Possible increase in number of people collecting plants within resort property. • The proposed action may weaken the resorts' claim to land in the park.	• The resort owners may use private guards to arrest or intimidate collectors. • The resort owners may take legal action to claim ownership of the park lands.	• Because the land claim of the resort area is questionable, the proposed action should not be modified. However, precautions may be necessary.	• Ensure that plant collectors have the necessary permits for collection. • Ensure collection takes place only in designated zones.

Strengths

- Provides useful background information on different stakeholders.
- Gives the community or organization ideas on how to relate to particular stakeholders.
- Provides insight into the dynamics and relationships of different stakeholders.

Limitation

- Some information/data about the stakeholders may not be readily available and, therefore, based solely on the perceptions of participants.

Tips

- Participants must be discreet and tactful in handling or using information derived from the exercise.
- This exercise can be done before initiating a partnership or joint activity (e.g., participatory coastal zoning, marine sanctuary establishment).
- This exercise should be repeated at key points in the project or program cycle to check on possible changes in the number and characteristics of the stakeholders.

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