Strategies of Influence for the Conservation of the Sangha River Basin: Insights from the Policy Sciences

William Ascher
Center for International Development Research, Duke University

ABSTRACT
The policy sciences framework can be a useful tool for analyzing the issues and strategies related to international cooperation for Sangha River Region conservation. It is a behavioral, problem-oriented, contextual, and interdisciplinary approach that helps to assess how stakeholder resources may best be utilized. It is important to ask what policies can be realistically implemented as opposed to those which may be optimal. Influencing strategies for policy implementation include: power, wealth, skill, enlightenment, respect, rectitude, and well-being. Different organizations use these different resources to gain influence and to define their positions. Two opposing positions are (1) a commitment to a direction for change vs. (2) identification of the "societal optimal" that balances objectives. Different organizations select their positions based on factors such as resources, membership, mandates, and relationships with other actors. There are eleven levels of policy knowledge: state of eco- and social systems; value of assessments of these systems; trends of these systems; actions of resource exploiters; exogenous factors affecting exploiters; government policies; reasons for government policies; policy alternatives; likely reactions to alternatives; institutional and process alternatives for better policy outcomes; and the reaction to these alternatives. There are tradeoffs between levels of knowledge and when to take action. There are also tradeoffs in integrating social and natural science into the policy process. Research questions necessary for an improved policy process may not match those being asked to address need for more information about the resources. In addition, overall objectives will have to be expanded within each stakeholder group to incorporate additional, and sometimes opposing, objectives of other groups.

The policy sciences framework can be useful for analyzing the issues and strategies related to international cooperation for Sangha River Basin conservation. This systematic framework, developed predominantly at Yale University by such individuals as Harold Lasswell, Myres McDougall, and Michael Reisman, is particularly appropriate because of its emphasis on the role of expertise in facilitating sound policymaking. Many of the organizations represented in this volume count expertise as among their strongest resources.

The policy sciences framework is behavioral, problem-oriented (and therefore value-committed rather than "value free"), contextual, and interdisciplinary (Frame 1). However, the aspect of the frame work that merits emphasis for this discussion is its process orientation. The emphasis on process helps to assess what is likely to happen to various options for influencing the policy process. It helps to determine how a policy actor's resources ought to be deployed (Frame 2).

Many of the organizations represented here have done excellent work on the substantive issues regarding forestry, conservation, and community development in the Sangha area. Yet probably few have had the time to think about how the policy process itself affects their operations and impacts. What does the process orientation show us?

First of all, it forces us to pay attention to what can be implemented rather than what is just technically optimal. Steve Gartlan

EDITOR'S NOTE:
Professor Ascher's comments at the close of the conference on which this volume is based responded specifically to points raised by participants in the papers and discussions. The rendering of his comments presented here serves as a review of questions raised in Sections I, II and III, and as an introduction to the transcribed round table discussion that follows.

made a comment in which he said the problem was not with design but with implementation. The process orientation tells us that if a project design is not going to be implemented there is something wrong with that design. You cannot presume that a design is optimal if nothing happens with it.

Second, it focuses on *behavior* in policy making — the behavior of individuals and aggregately by institutions, both formal and informal. It does not presume that formal rules and prescriptions are necessarily the effective rules and prescriptions. It focuses as well on the climate of opinion, characterized by hostility or amity, trust or distrust, arousal or apathy with respect to particular issues. Finally, the process orientation of the policy sciences approach calls for a strategy to enact the policy.

IDENTIFYING THE ISSUES

A careful assessment of our discussions about the Sangha region might identify the following issues as relevant (Frame 3):

First, and perhaps foremost, you are dealing with situations in which some of the actors are reluctant to accept your advice, no matter how correct or prestigious it may be. Every organization, whether a foundation, an NGO, a government, or an international organization like the World Bank, has to pay attention to its strategy of influence. Second, the substantive issues you are dealing with also have to force you to make commitments to particular strategies. The utility of information is crucial because many of your organizations rely heavily, if not completely, on information provision as a source of influence. Third, it is important to focus on how problems are identified, and how particular problems are identified as amenable to policy changes.

STRATEGIES OF INFLUENCE: IDENTIFICATION AND DEPLOYMENT OF RESOURCES

To begin with resource considerations for a strategy of influence: the policy sciences approach tells us that different individuals and organizations have different resource bases — different resources to invest — in order to gain influence (Frame 4). The first, of course, is political power. Should an organization with a high loading on political power use this for confrontation, condemning policies of which you disapprove? Will you call for an international police force to regulate the forests — a position that I personally believe is both infeasible and ethically problematic? Are you in a position to impose international sanctions on governments that persist in policies that your organization regards as irresponsible?

FRAME 1
The Policy Sciences Approach

Problem orientation
Interdisciplinary
Contextual
Value-committed
Process-oriented

FRAME 2
Process Orientation

Implementable rather than technically optimal
Focuses on behavior of policymaking
Focuses on institutions (formal and informal)
Focuses on "climate"

FRAME 3
Relevant Issues

Strategy of influence
Core substantive strategies
Utility of information
Problem identification

If your organization has wealth as a significant resource, you have to consider funding conservation, applying conservation conditionality for eligibility for your funding. You may invest this money in information. Several organizations represented here have reported that they are devoting major financial resources to undertaking applied or basic research. They may also try to mobilize public sentiment through advertising campaigns, not only outside of the Sangha River area but within it.

If a significant resource is skill — which seems to be the case for many of the organizations represented here — there is a host of types of investments that can be made: information, technical analysis, inventing programs and projects, knowing how to mobilize public sentiment, and influencing other organizations through argumentation and providing information. Then the question is whether this is a strategy that your organization wants to adopt.

The resource of enlightenment, or knowledge in the more generic sense than skill, naturally dovetails into the strategies of providing education and making contributions to basic understanding. Another, often overlooked, resource is affection. Many of the organizations represented here have impressive affection resources because of how many people spend time in the field, gaining the trust and appreciation of local people and, in some cases, government officials. The question of whether to take a confrontational or conciliatory position with respect to the local people and government officials to gain trust is also a consideration. These close relations are incredibly important. The possibility of using charismatic individuals is akin to using charismatic species to mobilize public sentiment. Jane Goodall, for example, is an important resource not only because she is very bright, but also because the affection people have for her can mobilize public sentiment. Respect gets you persuasion through reputation. The fact that many of your institutions are affiliated with universities, or you have your own research which is extremely respectable, gives you an opportunity to persuade people on that basis. It also gives you the opportunity to condemn policies that you disagree with. Rectitude, which is the internal feeling, the internal objective of doing good, brings a very interesting question: How many organizations are oriented toward the integrity of their operations instead of financial or professional advancement?

Finally, physical well-being is potentially relevant in two ways. First, your presence in the field as robust people who can survive in rough physical conditions is an important asset, and indeed a demonstration of your commitment. Second, your appeals for conservation can often invoke the protection of health, which is an enormously powerful appeal in many contexts.

FRAME 4
Strategy of Influences Resources

Power
- Confrontation
- Condemnation
- International policy
- International sanctions

Wealth
- Funding conservation
- Conservation conditionality
- Information
- Public sentiment mobilization

Skill
- Information
- Technical analysis
- Program/project invention
- Public sentiment mobilization
- Manipulation

Enlightenment
- Education
- Contributions to basic understanding

Affection
- Close relations with local people
- Close relations with government officials
- Public sentiment mobilization
- Charismatic individuals

Respect
- Persuasion through reputation
- Condemnation

Rectitude
- Integrity of operation rather than financial or professional advancement
- Well-being
- Energetic experts
- Invoking health benefits

STRATEGY OF INFLUENCE: STAKING OUT A POSITION

There is a crucial decision for an organization to make in defining its policy position: to commit uncompromisingly to a direction for change, as the defining characteristic of the organization, or to endorse the idea that the societal optimal is a balance of objectives (Frame 5). On the one hand, an organization may say:

> We are in favor of preserving species; everything we do is for that purpose; we reject the idea that we have to balance wildlife preservation with development. The world is so far away from the point where such a balance needs to be considered that we reject the need for a consideration of balance in the foreseeable future.

When organizations opt for this mode, the resulting debate is defined as a clash of values in an essentially all-or-nothing way: Group X favors ecosystem preservation; Group Y favors development; they fight it out. This approach is obviously confrontational, but it is also clear, both to the outside world and internally within your organization. As a consequence, it risks antagonistic external relationships, but it may also create more unity within your movement, because you do not have to test how far people really want to go in terms of conservation at the expense of local people's well-being.

FRAME 5
Two modes of picking "Policy Positions"

Commit to direction for change
Simple objective defines organization's mandate
Defines debate as clash of values in absolutist way
Confrontational
Clear
Risks antagonistic external relationships
Internal unity

Identify "societal optimal" that balances objectives
Balanced objectives define organization's mandate
Defines debate as search for convergence of values
Conciliatory
Analytically challenging
Risks internal unity

On the other hand, an organization may strive to identify a societal optimal that balances objectives (Frame 5). It is the *balance* of objectives that defines the organizational mandate. The GTZ presentation is very clear in that regard (Debonnet, this volume). As a government agency, it reflects a broad range of values and objectives. GTZ officials have put a lot of time into figuring out what their stance will be on all of these issues and, in some instances, even how to prioritize them. This approach tends to define the discourse more in terms of finding a convergence of values: "We actually all agree that conservation, development, respect for women, and other goals are important; let's work out this convergence of views."

Such a conciliatory approach also has its costs. First, it is very challenging analytically. It may be very easy to say that there is not enough conservation today in the Sangha River Basin, but it is a completely different and much more difficult question to ask what is the optimal level of conservation. This approach forces you to wrestle with that issue. Second, the task of deciding on the optimal balance risks internal relationships. A number of NGOs have been foundering in terms of their funding because of conflicts over how to make these balances.

Now the key question, I would submit, is which approach gives you the greatest credibility, influence and total impact? (Frame 6). There is no simple answer; it depends on which approach fits your organiza-

tion's resources. How stable is your membership base? How can you balance different objectives? How successful will a confrontational stand be for your organization? Can opposing organizations deny you necessary resources? How effective can you be in open debate? What is the most effective way that you can influence governments — through confrontation or "constructive dialogue?" Note that people at the World Bank and at USAID often argue for dialogue, even when interacting with government officials who are pursuing diametrically different policies or objectives. Obviously a key consideration has to be the implication of each of these strategies for your organization's internal unity. Without members and contributors, few non-governmental entities can survive.

There seem to be important differences among different types of organizations in terms of choosing confrontation vs. conciliation. Governments of fund-receiving countries like to minimize the apparent conflict involved, at least in part because they are supported financially by donor institutions, and conflict may reduce the willingness of donors to continue their support. Governments of donor countries are sometimes very much in favor of confrontation when there are political points to be made; in other circumstances they favor conciliation. International official organizations generally want to minimize the conflict, because they basically adopt the strategy of constructive engagement and constructive dialogue, and they are often enjoined against "taking politics into account." I have mixed feelings about that because, in my view, the best thing the World Bank can do is embarrass governments that adopt unsound policies in terms of the welfare of their people for political expedience. International non-governmental organizations seem to have mixed views on this. Some are very confrontational, others are much more conciliatory. Academic orientations are also mixed; one gets attention by being provocative, but when academics serve as consultants they sometimes end up with less challenging stances.

FRAME 6
Key Questions for Policy Positions

Which approach yields greatest credibility, influence and impact?
Which fits with organization's resources?
Which better balances pressure and dialogue?
Which better ensures internal unity?

TARGETING INFLUENCE EFFORTS

The importance of targeting of influence efforts arises from the wide variety of *levels* of government activity (Frame 7). An organization can focus on influencing (and participating in) projects, programs, sectoral policies, or even macro-level policies. The activities may be specific to narrow locales, regions within nations, entire nations, or international regions. Several generalizations are in order. First, in many cases there is a "project myopia," an unexamined preference for focusing on specific projects because they are "real" and concrete. The problem is that the success of concrete activities and specific projects often depends critically on programs,

sectoral policies, and the general policy regime. Much research on forestry demonstrates that policies seemingly far removed from the forestry sector have pivotal impacts. Policies like currency exchange rates heavily influence log exports; and credit policies often determine whether local people can afford to allow trees to grow to maturity. Therefore some organizations have been pulled to look more and more broadly at the kinds of policies that condition specific projects.

Second, the focus of the organization still has to be congruent with the resources of that organization. It does not make much sense for WWF to go to the World Bank and argue about the exchange rate established by the Cameroon government. WWF does not claim expertise in that area, nor are its supporters likely to be pleased if WWF resources are devoted to this sort of effort.

FRAME 7
Target of Efforts: Project, Sector, Macro?
Project myopia
Congruence with organization's resources

IDENTIFYING ACTIONABLE PROBLEMS

The foregoing points are general propositions that can apply to many different policy spheres; the issue of problem identification is highly contextual (Frame 8). The following text, therefore, addresses the specific context of the Sangha River trinational region, as presented in this volume.

FRAME 8
Target of Effects — Problem Definition
Is it a Problem?
Evaluation of alternatives
Assessment of value implications
Is it a policy problem?
Policy issue vs. fait accompli

The first question is whether an alleged problem is truly a problem in a normative sense. Some trends have negative connotations that falsely imply that the actual situation is problematic. For example, one might presume that "deforestation" is unquestionably bad. Yet upon further reflection it may become obvious that if there is an optimal amount of forest cover for any given country and if the current forest cover exceeds that value, then some deforestation would actually be desirable. Costa Rica 400 years ago was almost 100 percent forest; does that mean that Costa Rica should be 100 percent forest today?

Thus whether the trends and effects that we identify are problems or not depends on the value assessment that we use. At the conference, Zéphirin Mogba made a fascinating presentation about diamond mining within a national park. No one here came away from that presentation without an emotional reaction that the encroachment of the miners into the park was a "problem." But in the final analysis, the diamond miners are actually better off doing what they are doing than the alternatives — which explains why they are mining. The local people are better off as well, because they are providing various goods and services to the diamond miners. So the mining *per se* is not a socio-economic problem as compared with alternatives. It is a problem with respect to the degradation of that area of the national park. But trying to determine whether it is the kind of problem you want to do something about is a tricky issue.

DEFINING POLICY PROBLEMS

And then there is an even thornier issue: is a given problem (*i.e.*, a deprivation in any of the value categories) actually a *policy* problem? Here the distinction is between a policy issue as a deprivation that has some possibility of being addressed constructively, and a *fait accompli*.

Knowing whether you can actually do something about a problem is quite different from bemoaning the fact that it is a tragedy. There are many tragedies out there for which we can do very little. Because you all have to decide how to marshal your resources, we cannot afford to devote resources to the unfixable tragedies.

So how do we define policy problems (Frame 9)? First, we identify outcomes that are simply bad according to our values. Environmental degradation seems to be essentially condemned here. Virtually everyone is in favor of prosperity and against poverty. These are "bottom line" value positions, matters of philosophy and ethics rather than empirical investigation. Second, what are the proximate causes? Too much hunting? Too much agricultural conversion? Too much logging? Too much poaching? The third category is conditioning causes. What factors lead to these proximate causes? Conditioning causes include socio-economic conditions and poor policies.

FRAME 9
Identification

Identify bad outcomes per se
- environmental degradation
- poverty

Proximate Causes
- too much hunting?
- too much agriculture conversion?
- too much logging?

Conditioning Causes
- socio-economic conditions
- poor policies

Examples:

Afforestation rather than preventing deforestation?

Prevention or "restoration ecology"?

Low miners' wages and surplus labor theory

Weak enforcement capacity: "fact" or choice?

Let us look at the difficulty of distinguishing between the genuine policy problem and the *fait accompli*. Many international forestry experts are now arguing that afforestation ought to be more important than preventing deforestation, because it is too late to prevent the destruction of the remaining old-growth forests. The field of restoration ecology is based on this premise. So how do we define the problem: is it the protection of remaining forests or is it the restoration of some sort of forest, albeit probably with much less diversity?

What about the low miners wages? According to economic theory and much empirical evidence, low wages in a labor-surplus environment are inevitable. Sir Arthur Lewis demonstrated that surplus labor compels workers to accept subsistence wages in their competition with other job-seekers for scarce jobs. Unless and until the labor surplus is eliminated, there is very little that can be done about this. From a normative perspective, this is a terrible problem. But from a practical perspective can anything be done about it? Conversely, sometimes true policy problems are mis-defined as irremediable tragedies. Many people here have talked about weak enforcement capacity as if it were a *fait accompli*. At many conferences one hears something like, "The real problem here is that the forest guard is very weak, so the forestry regulations cannot be applied. What a pity that this is such a poor country that weak forest enforcement is inevitable." In fact, in many cases it is a *choice* to

have weak enforcement. To take a case from beyond the Central African region, Costa Rica's Direccion General Forestal, the official forestry agency of a country vaunted for its conservation, had a budget that was so deficient in paying for motor fuel that the forest guards had great difficulty getting out of the capital and into the forests. Moreover, during one period when the Costa Rican government was being pressured to put up check points to try to prevent illegal logging, the government permitted the newspapers to publish the time and locations of the checkpoints! Now, is this weak enforcement? Yes. Is it a *fait accompli*? I don't think so.

CHOOSING THE PROBLEM FOCUS

Let us now look at the other causal level, beyond the proximate causes. What are driving forces behind the dynamics of the diamond mining case? The presentation and the discussion thereafter mentioned a number of factors: armed migrants, greedy intermediaries, a greedy international cartel, corruption, weak enforcement capacity, unemployment, and unrest in other countries. *Plus* poverty, the local Mafia, and poor policy. Is it one factor or a combination? How do we get beyond the complexity of all of these factors? This is where the research comes in, and I was so heartened to hear that international NGOs are putting their efforts into trying to look at these dynamics. Now what about biodiversity decline? What are the causes for that: poverty, unemployment, poor policies, weak enforcement capacities, corruption, community disorganization, migration, population growth, uncertain property and user rights, lack of international cooperation, lack of financing, declining exports, unaccountable governments? Or ignorance, multinationals' misbehavior, first world government misbehavior, the World Bank, and even Khadafi?

A diagram that could show how all of these factors link together would certainly be remarkably elaborate. Yet the task is not to diagram everything, but rather to identify the factors over which your organizations have some leverage (Frame 10). If we can do very little about the fact that communities have had hostilities over the past few years, then there is little point in focusing on that. Yet if your interventions can in fact create more cooperation in a community, then that is an important focus. Of course, you also have to look at your own organization's impact on that particular factor. Perhaps someone can bring this community together, but not your organization; perhaps your comparative advantage as an organization lies elsewhere. It is also important to estimate the *probability* that your organization knows what it is doing. What is the probability that you are right and what are the costs of getting it wrong? That is why the principle of caution in terms of exploiting resources is so impor-

FRAME 10
Criteria for the Problem Focus

- Overall potential for change in factor.
- Organization's impact on factor.
- Probability of knowing the right thing to do.
- Costs of getting it wrong.

tant. However, it is equally important to take quick action against unsound resource depletion. Essential, too is the elaboration of a core strategy (Frame 11).

The most important defining characteristic of core conservation strategies is the stance on the issue of government control vs. community control of resource management. The history of interactions between NGOs and governments has yielded a strange dialectic on this issue. Years ago conservation groups put enormous pressure on governments to do *something* about conservation. This led to governments taking more and more control over forests. Unfortunately, government control has generally been highly unsuccessful in terms of conservation. Governments created protected areas with quite heavy state control, often leading to abuses. For example, the Korup National Park was established with a rather large buffer-zone around it — taking user rights away from the local people — and then the government proceeded to grant some concession rights to loggers. This type of abuse by the government itself, seen as cynical manipulations of conservation symbols, has naturally enraged many people in the NGO community and international organizations. Thus the second conflict centered around the sincerity and competence of governments to manage sensitive ecosystems. At the same time, developmentalists pointed out that local people were being harmed. If there is any convergence of views, it has come from the realization on the part of conservation organizations that doing something by and for the local people is essential for conservation to be viable (the so-called "use it or lose it" insight).

FRAME 11
Core Strategies

Basic view of how to approach conservation & development:
- NGOs & IFIs need to take stances toward government core strategies
- Policy process & politics —> strange dialectic
- Pollyanna optimality for both responses
- "Restriction through partial incorporation" for both responses?
- Goal substitution
- "They'll participate whether they like it or not."

This has given rise to the new wave of "community-based management." I am an ardent fan of this community-based management, and have put some effort into research and writing on the topic. However, we must be aware that even this promising approach can be oversold. It is common for policymakers to overestimate (and to over-report) the likely success of their initiatives (we call this "Pollyanna Optimality"). Even the technical work evaluating initiatives *ex ante* tends to over-estimate the benefits and minimize both costs and risks. New approaches appear to be panaceas. Approaches that have not yet been tested are given the benefit of the doubt. Those that have been found wanting appear to be fixable. The phenomenon becomes exaggerated when everyone in the world community is advocating the same community-based solution.

In this volume, the government representatives have been extremely positive about the promise of community-based development. The risk is that an approach presumed to be a panacea will easily turn into a disappointment; nothing can meet such high expectations. We also have to worry about the possibility that commu-

nity-based management will seem so alluring that it would allow governments to shirk their legitimate responsibilities toward conservation and poverty alleviation. If community-based ecosystem management is to be implemented successfully and sustainably, it must be augmented by government efforts to facilitate its efforts, *and* by a strong dose of realism.

Finally, we have to be concerned with the possibility that efforts will only be superficially committed to community-based management and the government supports it needs. This is because another common policymaking dynamic is *restriction through partial incorporation*, whereby the government claims to embrace an initiative, but actually limits its impact by adopting only superficial aspects of it. This is closely related to the *goal substitution* that occurs when means, such as bringing local people to a meeting, are substituted for ends, such as genuine and meaningful participation. One official from a prominent foundation recently reported finding that many development agencies now operate by browbeating local residents into attending community meetings, when local people would rather spend time in their fields because they know that participation is superficial.

FRAME 12
Useful Information

Impact <— credibility.
Impact <— presumed interest.
Information type shapes discourse.
Quantitative information & monetization —> cost-benefit analysis, not "rights and responsibilities."
Information type as gate keeper.

CREATING AND CONVEYING USEFUL INFORMATION

The topic of useful information is important for many of your organizations, inasmuch as providing information is a key component of the services you provide to the governments and the international community in general (Frame 12). One of the saddest lessons from the studies of how information is used is that the impact of information is often based less on whether it is correct than on whether it is credible to the audience and consistent with the interests and preconceptions of the audience. Information is interpreted by an audience of policymakers according to their perceptions of the source. The credibility and interpretations of the same information coming from different sources will vary. WWF-provided information has a different impact than World Bank-provided information.

A more troubling point is that the type of information actually shapes the nature of any discourse on the policies. Quantitative information, for example, on monetizing the value of natural resources naturally drives discourse toward a cost-benefit framework rather than a framework of rights and responsibilities. The moment an expert argues that gorillas are "worth" US $12 million based on contingent valuation estimates of how much people would be willing to sacrifice to keep those gorillas, the cost-benefit mode of discourse will begin. This is not to oppose cost-benefit analysis, but simply to point out that there are various ways of thinking about

what ought to be done. For example, one might argue that gorillas have a right to survive, whether human benefits outweigh the costs of keeping the gorilla population intact or not. Yet quantitative information can squeeze out a rights discourse by making a cost-benefit discourse seem more feasible and compelling.

It is also common that the type of information being discussed and debated determines who can actually get into the policy debate. Highly technical approaches, such as contingent valuation, travel cost estimations, etc., make some people's eyes glaze over. Some people are cowed into being quiet because they cannot master the techniques, or even interpret them.

The analytical levels are quite complicated. There are 11 levels of conservation policy knowledge that ought to be considered in formulating an environmental- or resource-related policy (Frame 13). First, you need to determine the state of eco- and social systems, and then you must assess them for their value implications. You have to assess them. You have to look at trends: it is not enough to say that Costa Rica has 25 percent forest area, and it should have 40 percent. You also have to determine whether it is 25 percent and steady or 25 percent and falling. The fourth analytic task is to understand the actions of resource exploiters. You have to look not only at the immediate factors as to why resource exploiters are taking these actions, but also at the exogenous factors, and, most importantly, you have to focus on government policies.

Next, if you wish to develop a strategy for changing government policies, you must determine why the government has chosen those particular policies. This is usually the missing link in resource analysis. We know that a government that undercharges for logging is encouraging excessive logging. It is quite lame to go to governments and accuse them of misunderstanding resource economics when this occurs. My research amply demonstrates that governments often understand why and how under-pricing is a policy failure, but there are other reasons why they are doing this. Unless you understand those reasons, you do not know what approach to take. Then you have to create policy alternatives, and predict the reactions to those policy alternatives. If you want to create a structure that consistently produces better resource policies, then you must also determine what kinds of institutional and process alternatives will lead to better outcomes. That is, even if you know the best policy, the policy process as it now exists may not yield that policy. Can you improve the interaction among institutions in order to get this done? And finally, if you try to change the institutional structures, what happens?

FRAME 13
Eleven Levels of Policy Knowledge

1. State of Eco- and Social Systems.
2. Value assessment of 1.
3. Trends of 1.
4. Actions of resource exploiters.
5. Exogenous factors affecting 4.
6. Government policies.
7. Reasons for government policies.
8. Policy alternatives.
9. Likely reaction to alternatives.
10. Institutional and process alternatives for better policy outcomes.
11. Likely reaction to 10.

KNOWLEDGE, ACTION, AND INACTION

Now let me touch on one last point: do you have enough information to act? (Frame 14).

Getting more information always seems like a tremendous advantage. But of course, there are huge risks in not acting. Let me suggest two working principles that will often make sense. First, when confronting policymakers who insist that the scientific community guide them, but are also eager to stall in the face of scientific disagreement, agree with other scientists to present *provisional certainty*, or, to use other language, a *tentative consensus*. Those of you who are scientists can certainly articulate what seems to be today's best strategy for conserving the Sangha River Basin, even if you have legitimate scientific disagreements on all sorts of issues. Will this strategy be modified a year from now? Perhaps. Maybe. Do we agree in every detail on this? Of course not, but this is the state of the art. The scientific community can convey a unified message which can be understood and which will not allow governments or international organizations to use scientific disagreement to their own ends, for example, by using apparent lack of consensus in order to delay taking important actions.

FRAME 14
Knowledge, Action and Inaction

Enough information to act?
More always seems better
Risks of inaction vs. risks of action
Principle #1: Provisional certainty
Principle #2: Strategic thinking on how to cope with uncertainty

Tradeoffs in integrating social and natural science into the policy process:
Research questions not selected for just intellectual/professional interest
Expanded value scope: conservation *and* development

A second working principle is to develop a plan of action that manages uncertainty rather than presuming that uncertainty must be resolved before action can be taken. Coping with the inevitable residue of uncertainty will always be the challenge. Do we know with certainty that human activity has triggered a pattern of long-term global warming? No. Do we want to wait until the year 2025 to find out? Can we afford to wait? Of course not.

Finally, let me point out, with reference to the question of integrating natural science, social science, and policymaking, that you must be prepared to bear the costs of doing this. While I am clearly in favor of such cooperation, I note that it is common for scientists to become disillusioned with this interaction when they do not understand the costs ahead of time. Those of you who are natural scientists have typically picked your subject matter because you have fallen in love with gorillas or other wonderful wildlife. You are also fascinated with ecology. You can indulge your intellectual curiosity. Do you want policy scientists telling you how to define your research question? The questions that need to be answered in order to make better policy may not be the questions that your intellectual curiosity alone would have you investigate. There is a difficult tradeoff here.

Second, if you really want to be involved in the policy process, many of you will have to come up with an expanded scope of objectives, because in a policy process you have people concerned about

conservation and others concerned with development. The questions you will be asked to address will call on you to clarify your objectives on this. Whether you are hardened preservationists, or whether you believe that human well-being is the overarching objective, you will have to ensure that all of these outcomes become part of your analysis. You will have to stretch your value inquiry as far as it is stretched by all other stakeholders.

WILLIAM ASCHER is Professor of Public Policy Studies and Political Science at Duke University, where he also directs the Center for International Development Research. He has written extensively on the subject of developing countries and natural resource policy issues. His research interests also include policy-making processes and forecasting methodologies. He has written on the uses of science and future studies in the policy process, and is former editor-in-chief of the journal *Policy Sciences*. He is completing a book exploring the political economy of natural resource policy failures in developing countries which will offer a framework for understanding why governments choose sub-optimal policies for forest, water, land, petroleum, and mineral resources.

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William Ascher, Duke University, P.O. Box 90239, Durham, NC 27708-0239. Tel: 919.613.7315; Fax: 919.684.2861
E-mail: ascher@pps.duke.edu.