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Analysis of Three Case Studies about Strengthening Community Institutions for Natural Resource Management

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Through Natural Resource-Based Industries

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Introduction

This session highlights the following three Case Studies that focus on the theme of Strengthening Community Institutions for Natural Resource Management:

1. The Governance and Local Democracy Project (**GOLD**) in the Philippines: USAID and Associates in Rural Development
   Goal: For local governments and communities to:
   - achieve effective systems of local governance
   - attain self-reliance
   - be active partners with the national government in pursuit of the national development agenda

2. The African On-Farm Productivity Project (**OFPEP**): USAID and Winrock International
   Goal: To improve the nutrition, incomes, and well-being of smallholder farmers by helping them gain access to good seeds of improved varieties of basic food crops.

3. The Living in a Finite Environment (**LIFE**) Project in Namibia: USAID and Management Systems International
   Goal: Increase benefits received by historically disadvantaged Nambians from Sustainable Management of Natural Resources in Communal Areas

- Governance and community empowerment
- Rural economic development
- Conservation

Analysis

Case Study Details

The tables (See Annex 1) systematically outline details from each case study relative to major topics they explored:

- Table 1--Preconditions
- Table 2--Implementation processes
- Table 3--Constraints
- Table 4--Impacts
- Table 5--Lessons Learned

The tables serve as a compilation and easy reference to the individual and collective details derived form the three case studies. They also form a the base for the next stage in an effort to attempt to identify "best" practices cutting across all case studies, not just those practices that might arise in the context of any given case.

Comparability

The GOLD, OFPEP, and LIFE project case studies all identify a wealth of learning from their individual contexts and actions. There are even some quickly gleaned crosscutting issues about the need for participation, benefit distribution, ensuring the rights of participants, the need for information, and others. However, without having utilized a comparative case study approach it is difficult to determine exactly the ways and the degrees to which the cases really do compare. Additionally, without additional analysis, it is difficult to determine whether any or all of the many "good" practices identified and discussed are replicable and therefore perhaps fitting into what might be defined and offered as a "best" practice.

Comparability and the ability to systematically derive both a substantial as well as increasing learning curve is a major challenge for the development community. Part of the challenge arises from the "disciplinary tribalism" that exists within the community. We are economists, geographers, anthropologists, biologists, ecologists, social ecologists, and the list goes on. Another part of the challenge is the role differentiation between practitioner, researcher, policy maker, butcher, baker, and candlestick maker. Each plays a role in what it is that occurs in development—yes, even the butcher, baker, candlestick maker, all of whom may be one person or members of a household of natural resource managers at the most local of levels in the context in which the rest of us try to work. We

all have something to learn from each other, and we must all work with each other in order for success to occur.

Let me focus my attention for a moment, however, on one of the key challenges that we must all understand—our world maps, perspectives, or conceptual frameworks. We all have them. We all use them as a frame of reference for our thinking, understanding, and acting. But, we may each go into the same context with a different conceptual framework. That is not much of a problem except when we are unable to acknowledge the conceptual frameworks of others, unwilling to communicate about our different points of view, or so obstinate that we will not revise our own conceptual frameworks even when new information better reflects the reality in which we are working. (See Annex 2 for "Reflections on the Value of Conceptual Frameworks for Practical Interventions in Development Efforts").

The point of raising the issue of the value of conceptual frameworks here is that they are fundamental components of the efforts to derive "best" practices. They serve, in effect, as the basis for the development hypotheses that shape our actions. They help bound the kinds of information that we need to be looking for and at to make determinations about what is good, bad, ugly, most recent, or perhaps even "best" among the practices that we are employing. But, before someone moves to condemn what might seem an academic exercise to draw theory into this discussion, it may be useful to reflect on two important ideas:

- First, as Kurt Lewin said: "There is nothing so practical as a good theory."
- Second, as Yogesh Malhotra offered as a constructivist corollary to Lewin's point: "There is nothing so practical as good practice of theory."

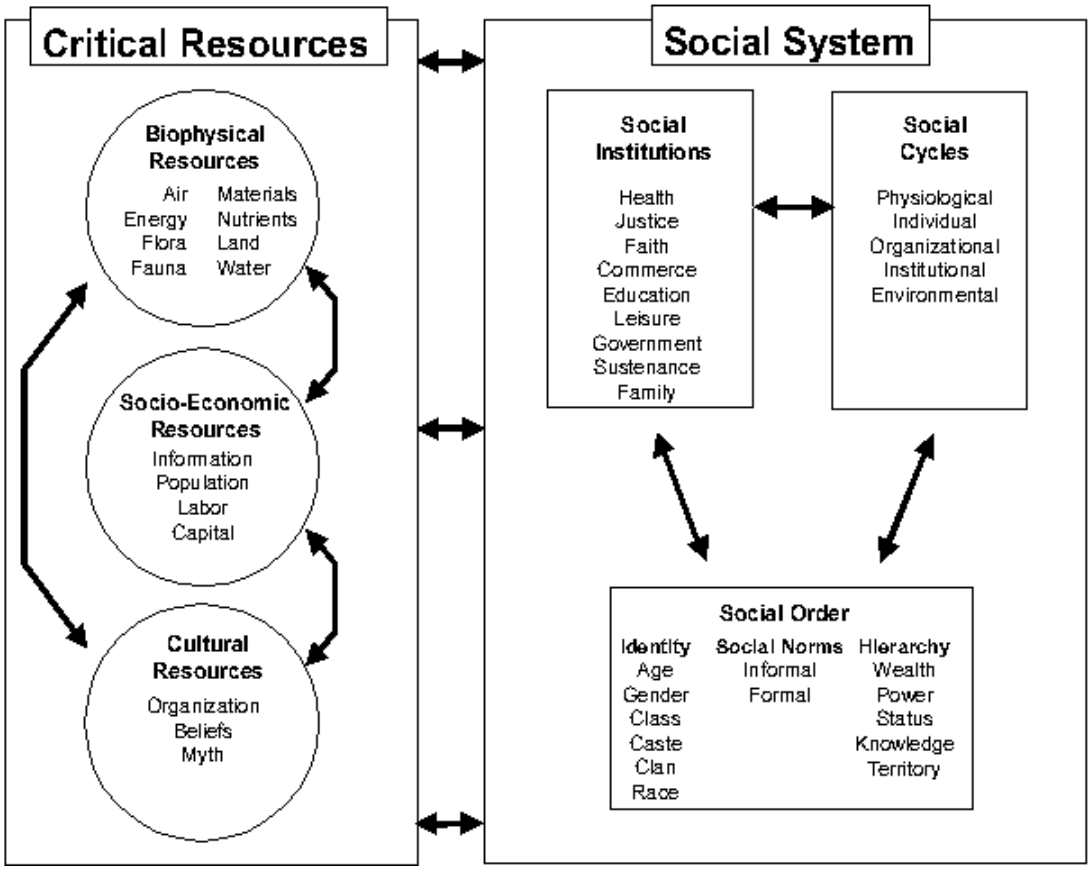
Given the potential value of a conceptual framework, it might be interesting to explore what one conceptual framework might contribute to the analysis of the three case studies on Strengthening Community Institutions for Natural Resource Management. The following provides insight into the development of a Human Ecosystems Model or framework. It has gone through various iterations through the efforts of William R. Burch, Jr. (at Yale University's School of Forestry and Environmental Studies), Gary Machlis and JoEllen Force (at the University of Idaho's School of Forestry), J. Kathy Parker (President of the Heron Group), J. Morgan Grove and others working on the Long Term Ecological Research Site under the auspices of the National Science Foundation) which is studying the Urban Ecosystem of the city of Baltimore.

There are some familiar variables in this human ecosystems model/framework. It looks at some of the patterns and processes of human ecosystems much like those described in the three case studies presented at this workshop. There are critical resources—some are biophysical; some are socio-economic; some are cultural. These affect the human system in many ways. We can identify patterns of these resources and

develop hypotheses about how they affect other resources and how they are affected by other patterns of resource use or abuse.

There are also processes like the flow of materials like trash may affect human health than is dealt with through organizations and may be defined as contrary to the human right to a healthy environment. There are flows of energy and other resources that affect different people in different ways depending on their status, their gender, existing systems of resource distribution.

Figure 1:
Human Ecosystems Model



For the purpose of this analysis, I have chosen one of the critical resources—capital. I define it more broadly than it is defined in the model/framework above. I define Capital as a stock of accumulated "wealth" that can be built, accumulated, and devoted to the production of more "wealth". All forms of capital are human constructs. They are identified by humans, defined by humans, categorized by humans, given value

by humans, and become resources only when humans so denominate them as resources. Iron is an element. Without use for it or ways of making it into something of use for it is remains an element. Its value derives from human designation that it is of use to humans. It's value changes when technologies—part of the wealth of human culture—make it possible to mine it, transform it into tools, when it is available to bought and sold as a good or product, etc. This is merely one example of a form of capital. There are many other forms, biological, social, economic, institutional, etc.

Thus, in this context, "wealth" can include an abundance or high quality of:

1) biological and physical capital comprised of elements that, when exploited, transformed, used, and therefore valued in some way by humans, are called natural resources;
2) social capital comprised of relationships that usefully connects people in more trusting group and organizational relationships that can be drawn on to solve problems and accomplish things that matter to us (e.g., cleaner environment, improved education, economic growth);
3) knowledge capital comprised of data, information and actionable knowledge and valued because of the power (e.g., control over intellectual property) obtained when we know what we know, when we know what we need to know, when we know how to know, and when we know how to use our knowledge purposefully;
4) human capital comprised of the totality of human attitudes, behaviors, and competence and given increased value when human imagination, intuition, education, skills, and experience are brought to bear on problem-solving and action
5) cultural capital, comprised of all human developments including technology, infrastructure, art, traditions, etc.;
6) organizational capital comprised of the wide array of agencies, associations, and other arrangements of humans into groups with norms, procedures, systems for distributing or allocating resources (whether equitably or not) on behalf of members of the group or of broader society;
7) institutional capital comprised, in this conceptual framework as the ends or higher order goals (e.g., justice, health, faith, education, commerce) of the organizations (e.g., courts, hospitals, churches, schools, markets) that are designed by humans to achieve them;
8) economic capital, the most conventional form of capital, comprised of a stock of accumulated goods, especially at a specified period; the value of these accumulated goods; accumulated goods that can be used for the production of other

goods; and/or accumulated possessions that can be calculated to bring in income.

These forms of capital can be used as one of many patterns that appear in the three case studies on "Strengthening Community Institutions for Natural Resource Management." Annex 3 "CBNRM Comparables by Capital Draft Presentation" provide an analysis of this kind. Information from each case study was put into a relational database that focused on the comparables (see the tables in Annex 1), the forms of capital (see discussion above), the case study name, etc. Annex 3 provides the report of a database run looking at comparables (i.e., preconditions, implementation, constraints, impacts, and lessons learned), forms of capital (e.g., economic, social, human, knowledge), descriptions of the forms of capital based on details in the respective case studies, and the case study.

Thus, in column one, we can look at the initial set of comparables. If we look at the set of comparables denominated "implementation" in column 1 and then at the kinds of capital that were identified by the authors of the 3 case studies, we see a variety of different kinds of capital that were being tapped or built during the implementation process, including economic, human, institutional, knowledge, organizational, and social capital. In applying the forms of capital as one lens through which to look at the implementation process in all 3 case studies, one can see that organizational capital is one aspect where there was a great deal of focus and is the only one where there is attention given to it by all three cases.

While somewhat less obvious from the way the Annex 3 report is presented—i.e., just of one variation on the possible relationships between variables—it is possible to see in the set of comparables called "Impacts" that some of the formation of new levels of capital identified there actually do flow from some of the capital that was either tapped or developed during, for example, the "Implementation" phase of the activity. Under OFPEP, development of human capital of extension workers are identified as having been affected (impacted) by gaining experience with new, more effective ways to work with farmers. Social capital of linking research organizations with smallholder farmers has developed their organizational capacity and therefore their effectiveness but possibly also has affected human capital formation in the form of capacity of farmers and likely economic capital formation in the form of increased incomes that are listed among the impacts of the OFPEP activity. Questions arise here about:

- How significant is the nature and magnitude of linkages between research organizations with the end-users?
- What is the time frame for certain kinds linkages for each level of interaction (e.g., at the beginning, slow; as the relationship develops, more; as there is hand-off of technologies, only trouble-shooting on a periodic basis)?
- What are the potential flows (unilinear, multidirectional, etc) of various impacts from a given set of linkages?

Another example comes from the LIFE project where because of institutional capital in the form of recognized authority because of status as a registered conservancy, increased capacity and experience, and developing relationships with the private sector, newly registered conservancies are proving capable of securing joint-venture business arrangements with private sector operators. And, a final example is found in GOLD where devolution of authority and capacity building of local government organizations in the implementation phase is reaping returns on their ability to identify environmental issues, organize community solutions, commit local revenues, and sustain local actions. These all imply that complex arrays of patterns and processes are at play in the development context that must be understood.

Tapping existing resources/capital and building new resources/capital have to be explored. Many, if not most of the questions may be generalizable. That is an important lesson. The answers will likely be unique and context-specific, but identifiable more quickly if a framework for asking and answering questions is applied.

It is absolutely critical to note at this point that this does not mean that any given kind of capital formation was or was not being done to a greater or lesser degree than any other form in each and every case. It is also important to note that the lens of this author might be different from the lens of another analyst even using the same definitions of capital formation. The authors of the case studies and the presenters at the workshop did not have this lens through which to do the analysis. However, these issues are important to consider for all the reasons that any of us can come up with in a discussion on the topic.

The more important point may be that these issues may be less important than what we might learn from even attempting a more systematic comparative analysis using some kind of conceptual framework. It can help bound the kinds of things we need to ask and answer about what it is that we do in development. If nothing else, this kind of analysis points out how a systematic analysis may begin to identify or raise questions about the kinds of things that we might begin to think about when trying to come up with "best practices". While well done, interesting, and useful individually, the three case studies may not add up to as much collectively because of the lack of comparability.

Obviously, it is my intent to provoke thinking on the issue of looking at various patterns of capital formation as one lens for comparing the case studies in hand. It is certainly not the only lens. However, it is one that perhaps might be usefully explored. We are in the business of learning how to do a better job at development. And, we are all dedicated to the concept of doing a better job at achieving more sustainable development. Tapping existing forms of capital and building them so that they produce greater forms of wealth that are the basis for greater sustainability, may be one area of further exploration.

Summary

In this context, I have raised two major issues. The first is the issues of comparability for the kinds of questions they raise about what "best practices" are and how we can determine what they are. The second is the issue of capital formation for the kinds of questions we might begin to explore that might contribute to greater success in our efforts to achieve more sustainable development.

ANNEX 1:

Tables Demonstrating Comparable Details from 3 Case Studies

TABLE 1—PRECONDITIONS FOR SUCCESS

OFPEP	GOLD	LIFE
Local Interest	Local Government Code of 1991, decentralized major authorities, responsibilities and financial resources to local government units	In May 1995, Namibia's Ministry of Environment and Tourism approved its Community-Based Tourism Policy that grants rights to communities over tourism within their areas of jurisdiction; communities have exclusive right to operate commercial tourism activities within a registered conservancy.
Status of food security	National government agencies shifted to a technical assistance role supporting priorities of local government	Communities must form themselves into conservancies and meet specified registration requirements (mapping of conservancy boundaries, with adjacent communities on boundaries; elected and representative management committee; community-approved constitution; benefit distribution plan)
Potential interest in developing a market economy for present subsistence farmers	Allocates forty percent of all internal revenue collections to local authorities and has a system for sharing national wealth extracted from local environments	Authority given to sustainably utilize and benefit from the area's wildlife; petition the MET for sustainable wildlife off-take quota, which can be auctioned to trophy-hunting firms or used for consumptive purposes; enter into contracts with private sector tourism operators
Availability of national research and extension system or universities as a source of germplasm, improved practices, and related information	Control - local is more genuinely in charge of all elements of service delivery - Local authorities have latitude within broad national guidelines to set and collect fees-for-	

	service and use-charges, to develop their own management methods and rules, and to collaborate with the non-governmental sector to deliver services	
Favorable government attitudes or policies with respect to working with NGOs and other community groups		
Existence of ongoing projects as potential collaborators		
One or more organizations or institutions interested in and capable of providing financial support for at least a 3-year, and preferably for a 5-year period		

TABLE 2—IMPLEMENTATION PROCESS

OFPEP	GOLD	LIFE
Collaborators work with small staff of local nationals	All local government partners/clients involved in GOLD have been chosen via a process of self-selection using screening criteria that aim to unearth the more progressive, less traditional leadership throughout the archipelago.	Providing Communities Greater Self-Determination, Management Authority, and Income
Work with and through NGOs, community-based organizations (CBOs), farmer associations (FAs), and Local extension works to establish participatory relationships with farmers	In three local government action areas: - Revenue generation and financial management - Investment prioritization and promotion - Environmental planning and management Other dimensions of the transition to local autonomy and decentralized service delivery: - Strengthening of participatory mechanisms - Supporting policy reform and advocacy through the Leagues of Local Government - Developing an information sharing and	Increasing tourism investment in communal areas - Assist conservancies to attract private sector tourism investment - Provide conservancies assistance to better understand private sector interests, and to review joint venture proposals - Create forums to build community-private sector partnership and understanding information - Encourage the establishment of joint management committees to ensure a mechanism exists for routine communication between

	feedback system	facility managers - Ensure that communities become partners in tourism development, and equitably share in the benefits - Ensure that joint venture agreements include clauses to provide communities training and opportunities to assume management positions - Support the integration of community-based tourism in Namibia's mainstream commercial tourism industry
Informal advisory group comprised of representatives of donors and major collaborators met semi-annually to review progress and problems	Participatory planning process - Tap the widest and most diversity community of stakeholders - Assist them to identify what is doable by them and their local government to address problems they want solved - Enable those very same stakeholders to self-assign responsibilities through immediately implementable action plans.	Increase communities' ability to productively manage (tourism) revenue - Ensure that conservancy committees represent the interests of the broader community - Provide conservancies the skills they need to account for funds and undertake financial planning - Develop and implement realistic conservancy sustainability plans, taking care to maintain a balance between operational revenues and expenditures - Develop benefit distributions plans
Integrate sound technical knowledge with social, cultural, and educational conditions at the farm level		
Bottom-up, using a participatory, request-driven approach where farmers with assistance from OFPEP and implementing partners, use participatory rural appraisal (PRA) techniques to identify problems and potential solutions.		
OFPEP serves as liaison between		

NGOs, CBOs and other community groups and research institutions that provide training and information about tested techniques to stem the decline in soil fertility and improve crop yields through improved varieties and management practices		
OFPEP collaborates at management level and in the field where small technical teams work with networks of local and international organizations and other groups		
Use a participatory approach through which farmers learn about new technologies and select and use those they find appropriate		
Provide technical assistance on a variety of topics		
Local consultants were engaged, when possible, because of their ability to respond to country-specific needs, their availability after the consulting assignment was over, as well as fulfilling the commitment to promote linkages and locally appropriate solutions		
Capitalized on "volunteer consultants" (e.g., local students, graduate students from universities abroad, and former Peace Corps Volunteers		
Where available, local consultants were engaged early in the program to assist in start-up activities relating to databases for information, collection of resource materials, economic analyses of markets for specific crops, and problems related to soil erosion and salinization of rice fields and provide training and ongoing support to local staff and partners		

TABLE 3—CONSTRAINTS OR WAYS IMPACT COULD HAVE BEEN INCREASED

OFPEP	GOLD	LIFE
If agriculture is to meet projected worldwide demands for food at reasonable prices, nations and development agencies must address at least two key issues: a) Support and management of research that addresses the technology constraints to productivity b) The policy, economic, and social issues and incentives that will facilitate production, encourage processing and distribution, and ensure availability to consumers	Code did not go far enough in devolving environmental management authorities and functions to local government. Of all the major services devolved to local authorities, those effecting the environment were least aggressively mandated and pursued.	The scope of Namibia's nature conservation act is too limited
Expectations, based on top-down approaches to extension, continue to be a constraint in working with new groups or in new areas	The national Department of Environment and Natural Resources placed considerable emphasis on a Code caveat that all environmental activities are "subject to the supervision and control of DENR". DENR devolved to local governments only lower level personnel (e.g., forest guards), few assets and no resources.	Traditional common property resource management regimes, such as those that operate in Namibia's communal areas, are often at odds with the requirements of building and operating market-driven private sector businesses
Division of responsibilities and decision making on a gender basis. Varies by crop and region. Rather universal constraint is that control and use of animals for power usually rests with men that restricts access women have to animals for land preparation, transport of inputs and harvests, etc. May generate tensions within household when yield women begin to achieve with basic food crops leads to marketable surpluses	Profoundly different perspectives from which each entity views the problem complicates the interface between national (e.g., technical inputs are needed) and local government (e.g., policies and practices coordinated with other elements operating in a geographic area are needed). Therefore, little coordination between sector-oriented agencies	There is a large chasm between the experience of Namibia's communal area communities and the requirements of operating a tourism facility that caters to international tourists
Constraint to find ways to conserve and build soil fertility through crop and soil management practices and	Organizations and incentives have impact on what actions get priority by field personnel (e.g., DENR focus less on local	Tourism investors can easily become deterred from working in communal areas because of the multitude of actors and

fertilization (organic and inorganic).	priorities or strategies than national ones)	organizations with which they must deal. Aside from causing confusion, this situation also increases their transaction costs.
OFPEP has encountered few constraints in this area. Those that exist include need to register NGOs, need to clear participatory practices with national extension service, etc. OFPEP has avoided perception that it has crossed a line between demonstration and technology diffusion vs. grassroots advocacy		Communities are short of development capital.
Size, composition and training of local-hire individuals to work with local groups. Transportation becomes an issue as # of local participating partners and operational sites become more scattered geographically		Public sector incentives to encourage increased tourism investment in communal areas have not yet been developed in Namibia
Categories of capacity building identified by staff: - Organizational management for sustainability - Specific agricultural production and harvesting technologies - Farmer participatory methods - Organization and management of small scale credit programs - Specific post-harvest, processing, marketing, and storage technologies Training needs assessment; Organizing and carrying out participatory rural appraisals; Developing and maintaining liaison with public and private sources of information and support; Documenting and reporting program activities and accomplishments		
If such programs are to help smallholder farmers move from		

subsistence to commercial production, less labor-intensive technology options are needed and CREDIT farmers require access to readily available credit on reasonable terms		
Obtaining acceptance and understanding of local groups, early on, of the value of participatory rural appraisals and in providing adequate training in how to conduct these		
Providing a broader range of training for local NGOs and similar groups, particularly in such areas as post-harvest processing, storage, marketing, and integrated pest management		
Getting local project staff to understand that effective execution of their role is in training NGOs, associations, extension groups, not in doing extension themselves		
Early involvement of private sector interests would increase supportive individuals		
Recognizing that use of new technology generates need for further technological changes		
Avoid problems for which neither farm-ready solution nor competent staff are available		
When production exceeds local subsistence needs, markets for surpluses become necessary		

TABLE 4—IMPACTS

OFPEP	GOLD	LIFE
Direct		
In all four countries, OFPEP has had a positive impact on agricultural production, food security, and farmer incomes	Satisfaction with local government rose steadily over period	Registration
An estimated 250,000 small and mostly poor farmers, many of them women, have learned or are learning about testing and implementing improved seed varieties and soil management	Local governments used one or more tools, developed management plans, hosted technical reviews, participated in environmental summits, budgeted self-generated revenues for	Conservancies are beginning to earn significant income from NRM-related activities

technologies for producing basic food crops	environmental purposes	
Farmers have eliminated or reduced the length of the 'hungry season' and, in come cases, produce surpluses for sale	Filled position of Code-mandated Environmental Officer	Structures are being created that will enable conservancies to manage their own finances
Farmers and farmer groups reconfirmed that seeds and soil fertility are priority issues	2,500 facilitators trained	Newly registered conservancies are proving capable of securing join-venture business agreements with private sector operators.
Technologies most in demand, are those that address food security and income generation	Local governments have basic capacities to: - Identify environmental issues - Organize community solutions - Commit local revenues - Sustain local actions	Progress is being made in moving conservancies towards financial self-sufficiency
Participation in OFPEP increased the prestige of women and strengthened the capacity of groups of women to plan, implement, and advocate programs		A new and more equitable model of community-private sector tourism partnership is emerging in Namibia
Strong links have been forged with research and technical institutions in all four countries		
Indirect		
Several OFPEP-introduced technologies have spread through farmer contact and observation to farming communities adjacent to but outside target areas		
Participating and non-participating farmers are identifying new problems and issues that they wish OFPEP to help them resolve		
NGOs and other community organizations now more readily accept the idea and value of participatory rural appraisals		
Farmers and farmer groups report that they now have more options and greater control over decision processes that affect their daily lives		
NGOs and other community organizations have improved capacities to plan, organize, and provide training; participation in OFPEP increased their credibility		

and prestige		
Research institutions gained access to farmers and their problems as well as opportunities to test research at the smallholder level		
Extension workers experienced new, more effective ways to work with farmers		
Sustainability		
Role of smallholder farmer (as active and participatory member of the research and extension team and exercises his or her roles through farmer associations or local NGOs. - In defining the problems constraining productivity, - in developing, through research and adaptive trials, satisfactory solutions, and - in demonstrating these in farmers' fields so farmers may choose among options those that meet their own criteria		
Building effective links with universities, research stations, NGOs, farmer groups, and similar organizations in all aspects of planning, implementation and evaluation. Such organizations: - remain in target areas for extended period; this facilitates monitoring, modification, and evaluation - Recognize the value of learning local languages and culture, or already are knowledgeable in these areas - Develop knowledge and understanding of community social structures, including leadership, groups, and problems - Strive to establish rapport through multiple assistance programs over time - Gain experience and confidence in participatory approaches to learning and community action		

TABLE 5—LESSONS LEARNED

OFPEP	GOLD	LIFE
Local staff as trainers to work with NGOs and other local groups and to help these groups establish training methods and materials for working with farmers	Do not focus exclusively on optimizing technical solutions. Give equal attention to normalizing governance processes by demonstrating tools and training locals in methods that could be used to address their own problems on an ongoing basis.	It is essential to have a legal policy foundation that allows communities to utilize and manage natural resources and enables communities to control tourism within their jurisdictions
NGO staffs and others in training needs assessments	Shift locus of responsibility for environmental management to local government and broad-based civil society groups. Recognize that macro policies have to be implemented at local level.	A strong base of organizational and financial skills is essential to building sustainable community conservation organizations.
Early establishment and orientation of a country advisory team	Reverse the conventional sector-oriented, expertise-driven process by addressing environmental problems through a governance perspective, rather than from a technical (sector) perspective. In this manner local government and civil society institutions become the foundation of a long-term commitment to environmental improvement.	Communities need support in understanding tourism, developing tourism skills, and integrating their activities into the mainstream commercial tourism sector.
Invitation to and mobilization at an early date of private sector participants	Focus less on trying to get people to support optimal technical strategies in total and more on enabling people to accomplish doable actions one step at a time. Sustainability is the ability of local institutions to manage processes and methods by which issues are continually acknowledged and for which doable solutions are continually experimented with by involving all stakeholders in generating such solutions.	Communities need support to negotiate joint venture agreements with private sector operators
Conduct studies to determine commodities or products for which there would be a continuing market demand		It is useful to develop a mechanism to encourage tourism collaboration between the government, private, and communities.
Briefing the country advisory team on the necessity of helping OFPEP establish criteria for		Communities need to acquire a legal personality to be able to interact with commercial tourism

setting priorities for responding to the many demands for services		operators on an equal basis, and to ensure joint venture operational and financial transparency.
Establishing procedures and schedules for data collection and analysis, as well as documentation and reporting of program accomplishments.		CBNRM programs need to be judged more broadly than solely on their ability to generate revenue
		Partnerships with the private sector are necessary to establish and operate successful high-end tourism facilities in communal areas

"New" technology: - Must be simple - Must not increase farmer's labor or time involved - It must satisfy household needs, including cash - It must conserve or build soil fertility - Initial investment must be minimal - There must be farmer-relevant incentives		
Smallholder farmer: - Knows how to recognize a good technology - Knows his/her socioeconomic context and inherent constraints better than anyone else - Welcomes assistance in gaining access to information on new technologies - Can be entrepreneurial if well-identified incentives are present - Gives priority to risk-adverse strategies - Diffuses technologies efficiently - Will reassign gender responsibilities when appropriate		
About OFPEP Process: - Must encourage and facilitate community participation - Must involve farmers at all stages from problem identification to evaluation - Must identify present, prospective stakeholders, public and private, formal and informal - Those who introduce and manage the process must have and maintain community credibility - Must be gender sensitive		

and responsive - Recognize and respect local and regional consultants		
Prerequisites to participation: - Must have time to participate before action is required; not appropriate in emergency - Financial cost must not exceed the values, economic or otherwise, that come from it. - Subject must have relevant interest, ability, experience, and (or) knowledge - Participants must be able to talk each other's language to exchange ideas - None of the participants should feel his/her position is being threatened - Decisions on action can take place only within the group's area of job and decision freedom		
About Implementing Agencies: - NGOs, CBOs, and FAs initially are skeptical of the private sector - NGOs have unwarranted confidence in the NGO sector and many have false assumptions or information about technology and their abilities - Some NGOs employ and retain agriculturally competent personnel - Most NGO personnel respond rapidly to sharply focused training - Most NGO personnel speak site-specific languages and dialects - NGOs perform critical first step introducing		

PRAs and technology to farmers - Experience with U.S. Peace Corps Volunteers generally excellent		
About Government Agencies: - Essential to work closely with national research and extension system - Include locally developed varieties and practices in field trials, demonstrations - Link NGOs and FAs with experiment stations and research staff - Welcome extension participation in all training, trials, and demonstrations - Invite educational institutions, at all levels, to participate in activities - Can provide facilitating policies and incentives		
About Private Sector: - Farmers have difficulties getting credit because of interest rates and lack of collateral - Focuses on specific products and services, less on production or marketing system - Maintain weak rapport with NGOs and extension services - Needs intermediaries, such as NGOs, to develop product demand - Some small farmers become commercial seed producers directly, or on contract		
About Winrock International: - Science/knowledge-based approach to technology appreciated		

- Demonstrated ability to operate successfully as non-biased catalyst - Provides important strategies through long-term commitment and continuity - Serves as a communication link to sources of technology - Brings conscience issues to technology assessment and diffusion - Introduces participatory approaches into all of its programs and projects		

Annex 2:

"Reflections on the Value of Conceptual Frameworks
for Practical Interventions in
Development Efforts"

A number of conceptual and theoretical frameworks currently exist that deal with the full array of social and natural aspects of the human ecosystem and their integration. One of the major challenges in selecting a framework for application is to identify the array of possible variables to be considered in most ecosystem contexts. These variables require some sort of framework for bounding and linking multiple, complex and typically interacting biological, physical, social and other variables. Thus, only some conceptual and theoretical frameworks may be useful to the variety of end-users who must also be considered. The following are some reflections on the value of conceptual frameworks relative to the end-users.

Citizens can use a conceptual framework to:

(1) make explicit their perceptions of reality (both what they know and what they may think they know);
(2) express their understandings and values of ecosystems;
(3) articulate their processes of interaction with each other, with other biological species, and with non-living elements of the environment;
(4) provide a basis for testing ideas about priorities for what needs to be learned and how learning, from their perspective takes place; and
(5) provide a record of what they desire and/or anticipate as outcomes from proposed ecosystem management interventions.

Researchers can use a conceptual framework to:

(1) provide a basis for outlining and justifying any assumptions they make and the questions they ask during the research process;
(2) help identify the most significant variables that need to be considered and suggest the linkages that may exist between them;
(3) help guide collection of data for a single study or provide a minimum set of variables that can be the basis of a model that, in turn, can be systematically tested in comparative studies (NOTE: If the value of the information proposed to be collected cannot be established, the information collection effort may not always be able to be justified);
(4) continually clarify the role researchers themselves play during the course of research;
(5) more explicitly link questions of citizens, managers and policy makers in research efforts; and
(6) provide a sound basis for any recommendations proposed.

Field practitioners can use a conceptual framework to:

(1) understand the realities with which they have to work;

(2) understand the complex interactions between humans and their resources and the potential impacts of given management interventions on humans and other elements of the biosocial environment (see Burch and Grove this volume); and

(3) identify potential obstacles, opportunities and options that they, as practitioners, might have available to them as they design and implement on-the-ground, multi-scale responses for adaptive ecosystem management.

Policy-makers can use a conceptual framework to have:

(1) a basis for raising questions and analyzing information that comes to them from researchers, practitioners, citizens, and organizations;

(2) better understanding of the complex interactions and issues on which they must make decisions; and

(3) more insight into the potential intended and unintended, direct and indirect impacts of policy interventions (Parker 1994).

(Original Source: Parker, J. Kathy. 1994. "Improving the Contribution of Forestry to Food Security: A Proposed Conceptual Framework for Designing Research Studies and Practical Field Interventions." Submitted to the Food and Agriculture Organization in Rome. Broomall, PA: The Oriskany Institute.)

Annex 3:

CBNRM Comparables by Capital Draft Presentation