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Mark, Protti

University of Massachusetts Amherst

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BUILDING A FRAMEWORK FOR ASSESSING
THE OUTCOMES OF PARTICIPATORY TRAINING:
A CASE STUDY FROM EL IMPOSIBLE NATIONAL PARK, EL SALVADOR

A Dissertation Presented
by
MARK PROTTI

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

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May 1999

School of Education
BUILDING A FRAMEWORK FOR ASSESSING
THE OUTCOMES OF PARTICIPATORY TRAINING:
A CASE STUDY FROM EL IMPOSIBLE NATIONAL PARK, EL SALVADOR

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Approved as to style and content by:

George E. Urch, Chair
David R. Evans, Member
R. Brooke Thomas, Member

Bailey W. Jackson, Dean
School of Education
ACKNOWLEDGMENTS

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To my parents, I owe immeasurable thanks for their unending love, patience and support. Finally, to my life partner, Michele, I am profoundly indebted for her constant support and unfailing love throughout this awesome process.
ABSTRACT

BUILDING A FRAMEWORK FOR ASSESSING
THE OUTCOMES OF PARTICIPATORY TRAINING:
A CASE STUDY FROM EL IMPOSIBLE NATIONAL PARK, EL SALVADOR

MAY 1999

MARK PROTTI, B.S., UNIVERSITY OF CALIFORNIA at DAVIS
M.S., STATE UNIVERSITY OF NEW YORK,
COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY
Ed.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor George Urch

In the field of rural development there is an increasing appreciation for the need to involve local people in all aspects of their own development. This situation has led to the emergence of many different participatory approaches that attempt to respond to this changing development paradigm. Participatory approaches strive to enable people to value and build upon the knowledge and power that already exists in their own community.

Paulo Freire’s work on transformative education has greatly influenced the process, content and expected outcomes of the different methodologies used to attain popular participation in rural development. Academics and development practitioners believe that by engaging in a participatory process, people will gain greater control over their own development which can lead to physical, behavioral, attitudinal, organizational and philosophical transformations within individuals and communities. Yet, little has been
done in evaluating the range of outcomes and longer term impact a participatory approach may have on the individuals and communities involved. Thus, the development field operates with an incomplete understanding of the potential benefits and limitations of participatory methodologies as they are applied to rural communities.

This study partially addresses such a deficiency through an in-depth, qualitative investigation of the short term outcomes generated by a training intervention based on critical pedagogy. The training took place in the communities of San Francisco Menéndez and Tacuba, El Salvador to respond to issues that emerged with the establishment of El Imposible National Park. Qualitative research methods were used to assess the program’s effects on the participants. These data, along with products and outputs generated by the participants during the training programs, were analyzed to develop a framework for assessing the short term impact of participatory training on rural development.

The research findings show that changes in consciousness level are highly individualized and could only be assessed from the researcher’s in-depth interactions with the training participants and from the perspective of the participants’ life situation and history. The study challenges policy makers, social researchers and development practitioners to consider the plurality of endogenous and exogenous community interactions as key components to the participatory process in rural development.
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CHAPTER I
INTRODUCTION TO THE STUDY

Background

Several trends have come together in the 1990s that make "participation" a requisite component of development policy-making. In the case of El Salvador, similar to other developing countries, the government's role is diminishing, environmental problems are mounting and citizens are pressing for democratic reforms. The stated goals of sustainable development have gained worldwide acceptance. These generally entail sound environmental management, broad-based economic development and the equitable distribution of goods and services.

For the past ten years, grassroots groups and nongovernmental organizations (NGOs) have been trying to meet the economic and social needs that governments have been unable to meet. Wider participation is not a solution sought only for political reasons, but experience has shown that policies and projects most likely to succeed are those that incorporate the input of all stakeholders, including the most marginalized groups (Zazueta, 1995).

Increasingly, in both the private and public sector there is a growing acceptance of the need to involve local people as active partners in all aspects of the development process. The emphasis has been on bridging gaps between development organizations and
resource poor farmers, and on finding new ways to adopt local knowledge, strengthen local capacities and meet local needs.

Though much has happened in the field of protected area planning and rural development in the past ten years, many conservation planners, researchers, extensionists and small farmers are still trapped in top-down, centralized institutions. Efforts to involve local residents into integrated conservation plans have largely limited local resident participation to accepting incentives for adopting a specific conservation land use practice (Chambers and Pretty, 1994).

Ideally, participation in development means the active involvement of people in making decisions about the implementation of processes, programs and projects which affect them. Over the past 20 years, participatory methodologies have been applied carefully by some development institutions and abused by others (Slocum, et al. 1995, p.3). Even the concept of participation means vastly different things to different people. The term has been used to encompass everything from local control and self-reliance to passive response to outside authority (Pretty, 1995; Rocheleau, 1994; Farrington and Lewis 1993; Evans 1977).

Many participatory methodologies strive for a deeper form of participation that leads to local control. They are heavily influenced by Paulo Freire’s work on transformational education (Slocum, et al. 1995; Pretty, 1994). While responding to immediate felt needs, the underlying process seeks to address issues of social relations, including the power dynamics between insiders and outsiders. The methodologies usually focus on involving local people in defining the problem, collecting the data, making the
decisions and implementing the solution. The assumption is that building this kind of participation will lead to long term capacity building, self-reliance and empowerment for individuals, households, local communities and institutions within those communities. By creating an enabling environment that encourages community members to reflect on their experience then act to overcome barriers to their own development, it is believed that the participants will grow as individuals and collectively as a community. Ideally, people’s consciousness will be raised and the process will weave together a more profound understanding of community problems with a shared vision for the future that integrates ownership and commitment.

Statement of the Problem

There is abundant literature which demonstrates that many of the participatory methodologies, such as Participatory Rural Appraisal (PRA), Training for Transformation (TFT), Participatory Learning and Action (PLA) and Participatory Action Research (PAR), have enabled rural communities to achieve a better quality of life and, more importantly, gain greater control over their own development (Ford, et al. 1992; Slocum, et al. 1995; Pretty, et al. 1995, Rocheleau and Ross, 1995, 1991; Rocheleau, et al. 1991). However, there is only scant literature which details the range of impacts a participatory methodology has on a community, and almost none from a critical adult education perspective. For the most part, traditional evaluators tend to limit their evaluation to determining whether or not project objectives have been fulfilled (Taschereau, 1998, p.3).
Even open-ended, qualitative evaluations tend to overlook the consciousness raising aspect of the educational process (Adelman, 1981).

It is often assumed that a facilitator or trainer who uses a participatory approach to fulfill project or training program objectives, will automatically raise the participants’ self-esteem, capacity to critically reflect and level of consciousness. The assumption is that a community or individual demonstrating a high degree of self-reliance in one area indicates the ability to critically reflect in all areas. There is a tendency in the development field to loosely interpret community organizational achievements as indicators of human transformation. These assumptions lead to confusion because practitioners will use the same indicators to mean many different things. For example, a community group may demonstrate proficiency in managing project funds; to some evaluators this may be an indicator of self-reliance while to others it may be an indicator of dependence on outside funding.

There is a clear need for further documentation on the tangible and the less tangible outcomes that arise from participatory approaches based on a critical pedagogy. Such case study documentation and assessment would further the discourse, inform the theory and refine the pedagogical practices associated with participatory methodologies. This research would contribute to a more meaningful exchange among practitioners and academics.
Purpose and Significance of the Study

The primary purpose of this study is to respond to the need for a detailed assessment of the outcomes of participatory training. By developing a framework for assessing the outcomes of three specific participatory training interventions, this study can serve as a model for assessing and systematizing the environmental, social and transformational impacts of participatory approaches in rural development. Secondarily, the study should stimulate reflection within the development field about the assumptions of participatory oriented efforts.

In this study, I try to give voice to the supposed beneficiaries of participatory development training by engaging the participants in the process where they largely determine the focus of the training for the purpose of addressing their needs. Then throughout and following the training, I use their experience and their words to provide the range of outcomes and longer term impacts a participatory approach may have on the individuals and communities involved. The framework for assessment derived from this exploratory effort will bolster the theoretical argument for future applications similar to this one, and the practical lessons learned can support other researchers attempting this form of participatory assessment.

This research project is significant on three levels. First, as described above, the study will contribute to the development field’s understanding of the potential benefits and limitations of participatory methodologies as they are applied to rural communities. Second, it will provide a carefully documented case study in the emerging area of participatory learning and action in the field of nonformal education by employing a
methodology that not only integrates participants into the research process, but also enables them to make decisions and take collective action based on that research. Third, the research may contribute to El Salvador's national effort to reduce environmental degradation by modeling a possible methodology for strengthening the collaboration between environmental NGOs and rural communities.

El Imposible National Park is a relatively small area (about 12,000 acres) that is critical to El Salvador's environmental recovery because of its role in watershed protection and its exceptionally high biodiversity. Also, it presents a unique management and research opportunity because unlike other protected areas in El Salvador it is being administered by an environmental NGO, SalvaNatura.

High population density, agricultural modernization, industrialization, pervasive poverty and 12 years of civil conflict have placed substantial pressure on El Salvador's natural resource base and environment. The result of this pressure has been extensive deforestation, loss of biodiversity and reduced capacity of coastal fisheries (Barry, 1990, p. 133).

Deforestation is particularly severe. Studies indicate that 98 percent of El Salvador's original forest has been cut. Currently only 327,000 hectares, or about 12% of the total area of El Salvador, remains under forest cover. The increasing scarcity of fuelwood has caused a dramatic increase in the market price and in the average time spent by rural families collecting it (PROMESA, 1993, p. 34).

The deforestation, in turn, has contributed to widespread soil erosion in El Salvador. It is estimated that more than 50 percent of all land suffers from severe soil
erosion. Roughly half of the Salvadoran population depends on crops planted on steep slopes, which are vulnerable to erosion, for subsistence.

Despite the environmental problems, El Salvador's level of biodiversity (as measured by the number of species present in protected areas and mangroves) is roughly equal to that of the United States. Unfortunately, this valuable resource is threatened by incursions into, and reduction of, important protected habitats. Currently, protected areas, which theoretically shelter most of the biodiversity, are equal to less than 0.6 percent of total area, compared with 9 percent in the United States (PROMESA, 1993, p.3).

Because of the region's severe environmental degradation and the large rural population dependent on small farms for its livelihood, the circumstances surrounding El Imposible are redefining conservation in El Salvador. The potential value of this research extends well beyond the boundaries of El Salvador to any country facing similar challenges.

**Design and Research Questions**

This study consists of a detailed assessment of a nonformal education strategy aimed at enabling residents of communities bordering El Imposible to participate in the planning and management of the protected area and, ultimately, to have control over their own development. The residents engaged in three different nonformal education training programs designed to organize and stimulate local knowledge about surrounding natural resources, land-use practices and the management of the adjacent protected area. The goal of the training programs was not only to enable residents to participate in protected
area management but, in some cases, to also require them to define their relationship with the NGO responsible for managing the protected area. The three topics covered by the training programs were: 1) community based watershed monitoring and protection; 2) community based planning and organization; 3) building a bridge between rural communities and SalvaNatura, the NGO managing the protected area.

The assumption was that as a result of the participatory training, the participants would be better able to identify, define and shape their relationship to the protected area as a conservation entity. By facilitating and participating in the inquiry process, I used both participatory and observational qualitative research methods to describe behavioral and attitudinal changes that occurred before, during and after implementation of the participatory training.

The following questions helped guide the research:

1. What environmental, health or economic impact did the training programs have on the community?

2. How did the training programs affect the participants' perceptions of SalvaNatura, the protected area and the environment?

3. To what extent did the proposed training interventions lead to greater community organization, especially as it relates to the management of the protected area?

4. How will the participatory training programs affect the distribution of influence, power and access to decision-making within the community?

5. Will the training programs based on critical pedagogy have any effect on the consciousness level of the participants?

Qualitative research methods, including in-depth interviews, focus groups and participant observation, were used before, during and after the training programs to assess
the program effects on the participants. These data, along with products and outputs generated by the participants during the training programs, were analyzed to develop a framework for assessing the short term impact of participatory training on rural development.

The framework groups the data into three general categories of assessment: 1) environmental, health and economic impacts to the community and natural resource base; 2) organizational changes that affect the community’s capacity to act toward the resolution of specific problems; 3) changes in critical consciousness associated with individual and/or collective transformation.

The framework illuminated common characteristics or connections between things that may have been perceived as unrelated. This in turn led to a deeper understanding of the essence and meaning of the social change process, and hopefully, how to relate to it in a more constructive way.

Assumptions and Limitations

For the purposes of this study, the concept of participation assumes deliberate efforts to increase control over resources, processes and regulative institutions by rural communities or on the part of groups and movements ordinarily excluded from such control. It is assumed that a primary aim of participation is to empower marginalized or disenfranchised individuals or groups (Campos, 1990; Pretty, 1995; Chambers, 1997).

It is assumed that individuals perceive and shape their own reality based on their life experience. Some of these perceptions have tendencies toward oppressive systems,
others towards emancipation. The techniques of experiential, nonformal, adult education can play a significant role in enabling individuals to become conscious of the external forces which shape and influence their lives. It is possible to become conscious of more oppressive realities and act upon them, transforming them into opportunities for human liberation.

The fieldwork for this study took six months to complete and was conducted completely in Spanish in a rural part of western El Salvador. As an outside researcher, sponsored by SalvaNatura, I operated within an arena replete with potential biases. I adopted several strategies to try to identify and minimize both my own prejudices, and those I perceived from the Salvadorans who worked with me. A discussion of these strategies is provided in the methodology portion of this document. Inevitably, all the biases inherent to this cross-cultural endeavor could never be completely addressed.

I provide a summary of Salvadoran history, society, culture and politics as it pertains to the context of the field study. This is not intended to be a comprehensive discussion of the Salvadoran context nor do I claim to be an expert of Salvadoran history.

The detailed description of the methodological aspects of this inquiry are designed to make a contribution to the comprehensive assessment of participatory approaches in rural development. The procedure for building the framework is intended to be field-tested and applied in many diverse settings. However, most of the data presented in this study is highly contextual to western El Salvador, and the specific outcomes are not intended to be generalized.
Organization

This study is organized into seven chapters. Following this introductory chapter, Chapter II reviews the literature as it relates to how participatory methodologies for rural development have evolved in response to changing assumptions and perspectives about knowledge and power in rural communities. The first section includes a review and analysis of the theoretical framework which underlies the generation, application and dissemination of knowledge in rural communities. The second section examines the emergence of participatory methodologies and the extent to which they embody evolving perceptions of the need for local participation and empowerment in rural development. The third section presents an overview of some of the societal transformation goals of nonformal education, especially the profound impact the educational philosopher Paulo Freire is having on current methodologies for rural development.

Chapter III presents an overview of Salvadoran history, society, culture and politics as they pertain to the context of the field study. This is followed by a more detailed description of the communities involved in the study.

Chapter IV focuses on the research design and methods used to conduct this case study. This chapter provides a detailed description of the methodology as I worked through the various stages of my field research. Chapter V discusses the process of combining theoretical foundations with field data analysis to develop the framework for assessing the outcomes of the participatory training.

Chapter VI organizes and presents the dissertation findings according to the assessment framework developed in the previous chapter. The three major areas of
assessment are: 1) Environmental, health and economic impacts to the community and natural resource base; 2) Organizational changes that affect the community’s capacity to act toward the resolution of specific problems; 3) Changes in critical consciousness associated with individual and/or collective transformation. Chapter VII is dedicated to presenting the conclusions of the study and recommendations for future research.
CHAPTER II

REVIEW OF THE LITERATURE

**Introduction**

In his inaugural address on January 20, 1949, United States president Harry Truman launched the developed world on an ambitious mission to save the underdeveloped areas of the world. What came to be known as the Truman doctrine set the tone for the kind of relationship that would dominate the interaction between the developed and less developed countries into the 21st century.

More than half the people of the world are living in conditions approaching misery. Their economic life is primitive and stagnant. Their poverty is a handicap and a threat both to them and to more prosperous areas. For the first time in history humanity possesses the knowledge and the skill to relieve the suffering of these people...I believe that we should make available to peace loving-peoples the benefits of our store of technical knowledge in order to help them realize their aspirations for a better life...What we envisage is a program of development based on the concepts of democratic fair dealing...Greater production is the key to prosperity and peace. And the key to greater production is wider and more vigorous application of modern scientific and technical knowledge (Truman [1949] in Escobar 1995, p.1).

Though by today's standards this statement might appear arrogant and ethnocentric, it is important to review because it ignited an ideology that still governs decision makers' understanding and management of world affairs. The development
ideology revealed by this statement shaped the hegemonic foundation that still underlies the majority of rural development strategies practiced today. Until recently, the underlying assumption supporting the majority of foreign assistance rural development methodologies was that valid knowledge can only be created by industry and academic institutions in developed countries (Escobar, 1995, p. 2).

Because the majority of the world's poor (1.5 billion) subsist on resource poor farming systems, many of the rural development methodologies that have been developed focus on the transfer of agricultural technology (World Resources Institute, 1994, p. 291). The majority of the approaches and methods that transfer agricultural technology were designed to promote agrisystems which advance industrial and green revolution agriculture. Conventional approaches to agricultural research and extension were focused on and limited to the technical aspects of increasing agricultural production. Similarly, methodologies established to promote rural development emerged from the same transfer of technology paradigm with the underlying assumption being that external knowledge was superior to local knowledge.

In the early 1980s a group of natural and social scientists and development professionals came together to share their frustration with the existing agricultural assistance programs which all but ignored the resource poor farmers they were designed to benefit. As a result of this encounter and largely through the efforts of Dr. Robert Chambers at the Institute for Development Studies at the University of Sussex, the farmer first movement was born. The principle underlying farmer first has been that much of the problem with conventional rural development has been in the processes of generating and
transferring technology, and that the only solution lies in the unrecognized capacities and priorities of the small farmers themselves. Proponents of farmer first claim that the interest and support that this populist philosophy has received since the late 1980s has led to nothing less than a paradigm shift (Scoones and Thompson, 1994, p. 2). As the name implies the approach strives to give priority to the knowledge, aspirations and agenda of the small farmer. Most importantly, this new populist approach strives to involve the small farmer in his/her own development.

Increasingly, in both the private and public sector there is a growing acceptance of the need to involve local people as active partners in all aspects of the research and development process. The emphasis has been on bridging gaps between development professionals and resource poor farmers, and on finding new ways to adopt local knowledge, strengthen local capacities and meet local needs.

Though much has happened in the field of rural development in the past ten years, many development planners, scientists, extensionists, researchers and small farmers are still trapped in top-down, centralized institutions and transfer of technology methodologies. In many cases the populist discourse has been co-opted without the substance. In some "participatory" methodologies, for example, the farmers' participation has been limited to accepting incentives for adopting a new technology (Woodgate, 1994).

The purpose of this literature review is to describe how participatory methodologies for rural development have evolved in response to changing assumptions and perspectives about knowledge and power in rural communities. The first section of this chapter presents a review and analysis of the theoretical framework which underlies
the generation, application and dissemination of knowledge in rural communities. The
second section reviews different participatory methodologies and considers the extent to
which they embody evolving perceptions of the need for local participation and
empowerment in rural development. The third section presents an overview of some of
the societal transformation goals of nonformal education, especially the profound impact
the writings of Paulo Freire is having on current methodologies for rural development.

Theoretical Reflections on Knowledge and Power as a
Social Process in Rural Communities

Modern science is a single system of knowledge among many, yet it is the most
powerful and universal. In contrast, rural people's knowledge is contextual and differs by
locality, group and individual. These differences are reflected in the way people know,
learn and perceive power and weakness. The farmer first movement, or populist
perspective, began in the late 1970s as a collective effort among rural development
practitioners to recognize and validate local knowledge systems (Chambers, 1983a). In
the last ten years, several farmer first advocates have pointed out that although many
positive changes have come about as a result of the populist perspective much has yet to
be done. Currently, development practitioners and academics are reflecting on the lessons
learned from farmer first and are attempting to redefine the process of rural development.
Though this most recent effort still lacks structure and identity it has been referred to
loosely as the beyond farmer first movement (IIED, 1992), or as I refer to it throughout
this review, the post-populist perspective.
Agricultural systems and natural resource use by subsistence farmers are part of a dynamic process of coming to terms with ecological constraints, conflicting social interests, shifting power structures and competing world views. This holistic perspective of agricultural systems challenges the dominant conception in agricultural science that assumes agriculture to be a technical series of carefully planned practices. It recognizes agriculture as a highly social and political process (Scoones and Thompson, 1995, p.5).

In the following section, key theoretical challenges for developing and implementing participatory community development methodologies that address the issue of knowledge and power in a rural context are identified. The first part of the discussion will explore the contrasting representations of rural people's knowledge and the consequences of taking a different view of scientific and rural people's knowledge. Then the review will consider knowledge generation as a complex process that integrates accumulated social experience, commitments, culturally acquired dispositions and the context of the actors involved. This will be followed by a discussion of the process and consequences of the transmission and transformation of knowledge within the dominant framework of the transportational paradigm. Part of the discussion will focus on strategies different stakeholders adopt for maneuvering within perceived power structures and their implications to methodology design. Throughout the section the discourse and the multi-faceted nature of power inherent in the relations between development practitioners and local people will be analyzed.
Characterization of Local Knowledge by Outsiders

The literature on knowledge systems and development generally characterizes local knowledge in one of three contrasting ways.

1. Local knowledge is "primitive", "unscientific", "wrong". Formal research and extension must educate and direct rural people's livelihoods in order to develop them.

2. Local knowledge is a valuable and underutilized resource and needs to be extensively studied and incorporated into formal research and extension practice in order to make agriculture and rural development strategies more sustainable.

3. Neither local knowledge nor western science can be regarded as unitary stocks of knowledge. They represent contrasting, multiple epistemologies produced within particular ecological, socioeconomic and political settings. The interaction of local knowledge with western knowledge must address fundamental issues of power and need in development (Scoones and Thompson, 1994, p. 17).

Each of these representations defines the concept of development in a distinct way. In the first category, development is seen as a modernizing force which acts to transform traditional practices. Within this paradigm local knowledge systems or traditional farming methods are characterized as backward, inefficient, or inferior (Warren, 1991). From this perspective not only is local knowledge to be ignored by outsiders but it should also be abandoned in the modern development process, and replaced by modern, economically efficient technologies.

The origins of this prejudicial perspective can be traced to the oral and written accounts of early nineteenth century western explorers, missionaries and scientists who
embodied the predominant perception that western science and progress is superior (Warren, 1991). As indicated in the introduction to this chapter, although this perspective may appear outdated and blatantly ethnocentric, this hegemony persists in much of the development discourse and founded the majority of the existing development institutions (Escobar, 1995). The superiority of "instrumental knowledge" is assumed and the pursuit of change (development) is derived almost exclusively from the research findings of academic institutions and transmitted to farmers through hierarchical, technically oriented extension services. Farmers are considered capable only of adopting or rejecting the technologies. They are not considered able to develop their own technical knowledge nor improve their practice. This is generally known as the "transfer of technology" paradigm and will be elaborated upon in a later section dedicated to the transmission of knowledge (Chambers and Ghildyal, 1985, Sachs, 1992).

The Populist Perspective

Within the last fifteen years, the transfer of technology view has been challenged by the advocates for the validity of local knowledge. This position sees the starting point of development as an active and equitable partnership between rural people, researchers and extensionists (Chambers, 1983). Outsiders are viewed primarily as catalysts or facilitators of the exchange of ideas between internal and external knowledge systems. Proponents of this approach emphasize the rational nature and sophistication of rural people's knowledge (Scoones and Thompson, 1994, p. 18). Sometimes they tend to romanticize indigenous knowledge and believe that it should be incorporated into formal scientific knowledge systems (Thrupp, 1989, p. 22).
Under this populist paradigm farmers' "ignorance" about new or western technologies is not a matter of "stupidity," but is largely a manifestation of poverty, social inequities, inaccessibility to resources and resistance. In many cases, new methods are shunned because they are not suited to the needs and environments of resource poor farmers or are inferior to the existing techniques (Chambers and Ghildyal, 1985). Moreover, the so-called "backward" practices are often rational responses to local conditions and are logical adaptations to risks. With the emergence of increasing anthropological and agroecological studies from rural communities in less developed countries, growing numbers of academics and development practitioners have expressed laudatory views of local knowledge and capacities (Thrupp, 1989, p. 14). Within this emerging populist paradigm traditional knowledge, or as it is commonly referred to in the literature "indigenous technical knowledge" (ITK), is characterized as effective, efficient, and functional (Farrington and Martin, 1988). However, many studies reveal that such knowledge extends beyond technical aspects, and includes non-technical insights, perceptions and capabilities which pertain to subsisting in a resource poor environment (Toledo et al., 1985). In this way, ITK becomes "rural people's knowledge" or RPK. Although this change does not yet dominate the literature it is clear that this broader conception of indigenous knowledge is gaining wider acceptance (Scoones and Thompson, 1994, p.18). The literature extolling the virtues of ITK and RPK are voluminous especially in the areas of agroecology and agroforestry including: 1) multiple cropping patterns, 2) pest control methods, 3) soil fertilization and tilling, 4) polycultures, 5) small animal husbandry, 6) seed/variety selection, 7) uses of wild plant species, 8)
botanical taxonomies, and 9) curative qualities of herbs. These have been described by several authors (as in Altieri, 1987; Chambers et al., 1989; Toledo et al., 1985; Juma, 1989; Rocheleau, 1987; Brokensha et al., 1980; Carlier, 1987).

Proponents of this populist approach emphasize the rational nature and sophistication of RPK and believe that knowledge can be integrated with or incorporated into formal scientific knowledge systems. The argument being that if local knowledge and capacities are granted legitimacy within scientific and development communities, existing research and development projects will pay greater attention to the priorities, needs and capacities of rural people and in the end achieve more sustainable results (Thompson, 1991).

Along with changes occurring in professional attitudes and behavior towards local people's capacities, practices and values, this paradigm shift has motivated the development of methodologies which support and emphasize local knowledge. These methodological and institutional transformations are seen as part of a larger paradigm shift in the direction of grassroots organizing, bottom-up planning and a general trend toward local empowerment (Scoones and Thompson, 1994, p. 19).

Critics of the populist perspective argue that the attempt to blend or integrate local knowledge systems into existing transfer of technology methodologies operates under the false assumption that rural people's knowledge represents a unitary stock of knowledge that can be easily compartmentalized and incorporated into existing western biological and agricultural theories. They point out that any knowledge system is dynamic, discontinuous and represents a complex interplay of instrumental, interpretive and critical knowledge
that can never be categorized or logically integrated (Scoones and Thompson, 1994, p. 19). Scoones and Thompson further claim that, "To remove local knowledge from the context from which it was created and force it to fit into the limited framework of western scientific rationality will inevitably lead to significant errors in interpretation, assimilation and application" (1994, p.19).

There are abundant instances which demonstrate that scientists and farmers view agriculture from different perspectives. In one case in Africa, a researcher described a situation in which the final cropping pattern of a subsistence farmer appeared to be a carefully thought out, complex, rational planting strategy, but in reality emerged from a series of immediate responses to unfolding events in a particularly unpredictable season (Richards, 1989). The farmer's actions reflect adjustments which took place sequentially in the changing agroecological and socioeconomic context. In contrast the researcher's perspective evolves from adhering to the scientific method which gives the researcher the luxury of developing conclusions as a result of numerous trials under controlled conditions. The farmer’s primary concern is surviving the season; in contrast, the scientist's priority is comparison and replication.

There have been instances where RPK has lost its value because well-intentioned scientists and researchers "scientized" it by examining it with formal empirical methodologies (Thrupp, 1989, p. 19-20). Although such scientific verification can be useful to demonstrate the function of local practices and systems, this systematization tends to isolate specific traits and overlooks the total function and subtle nuances of local knowledge systems. The "scientization" of RPK in positivist terms, therefore, is not a true
form of legitimization, and is abstracted from its value to local people in its own context (Scoones and Thompson, 1994, p. 20).

Lori-Ann Thrupp described an example of the process of "scientization" for what is now known as agroforestry by scientists and development experts. Even though small farmers throughout the Third World have been mixing trees with crops for centuries, it was not until the early 1980s that it was legitimized by western scientists (1989). In order for the technique to gain validation in academic and development circles, scientists had to develop terms such as agroforestry systems, agropastoral systems, polyculture, agroecology and complete systematic research trials. When the collection of techniques were adequately modified and repackaged by agronomists and foresters, they were then transmitted back to the small farmers through extension services.

Post-Populist Perspective

Despite the shortcomings of the populist perspective summarized above, the post-populist or the beyond farmer first perspective, in no way contradicts the basic tenets of the movement (Scoones and Thompson, 1994, p. 21). The goal is still to enable the rural poor to participate in and control their own development. The post-populist position does adopt a more pluralistic view of knowledge generation and presents a more critical agenda that recognizes the relationship between power and knowledge in rural development. Factors such as gender, ethnicity, class, age and religion play a more prominent role in this post-populist perspective. Rather than considering the post-populist perspective as a school separate from the populist school, it would be more appropriate to consider the perspectives at different points along a continuum of alternative world view.
Table 1 compares the populist perspective and the alternative views of the emerging post-populist perspective in terms of their basic assumptions, processes of internal and external interaction, roles of the insiders and outsiders and types of research and methodologies.

An inherent assumption in the populist perspective is that small farmers and communities in complex and diverse environments share common goals, aspirations, world views and have equal access to resources. The perspective assumes that local knowledge is a unitary, systematized stock of knowledge available for assimilation with western scientific knowledge. The post-populist perspective has evolved to the point where it recognizes that different types of local and non-local people hold many divergent, sometimes conflicting, interests and goals as well as wildly different access to vital resources. Knowledge is considered diffuse, fragmentary and pluralistic and emerges as a product of interactions between actors in diverse situations. Misunderstandings, inequitable relationships, hidden agendas and maneuvering for power are the rule, not the exception (Scoones and Thompson, 1994, p.22).

The processes through which different interactions take place are viewed differently. For the populist approach the emphasis has been on finding consensus solutions to identified problems through managed research and development methodologies. Local people may be involved in the diagnostic analysis of problems, and in the planning and implementation of specific projects but ultimate control of the process remains with the outsiders. The key issues for the post-populist perspective are conflict
resolution and negotiated agreements between different interest groups vying for control over resources and power (Scoones and Thompson, 1994, p.22).

The roles of the insider and outsider are defined in contrasting terms. The populist perspective envisions the role of the researcher, extensionist or other outsider to be that of a facilitator or catalyst and the role of the insider to be a partner. In reality, in most populist methodologies outsiders fall back into the roles of instructors, planners, managers, information collectors or evaluators of development initiatives (Schoonmaker, 1994, p. 125). The post-populist perspective rejects the clear cut insider/outsider dichotomy and argues "all actors must consider development as a transaction process involving negotiation over divergent goals and struggles over room to maneuver" (Scoones and Thompson, 1994, p. 23).

Despite the ideological conflict, research methodologies that have emerged from the farmer first movement have followed a mostly positivist agenda centered on structure and systematic organization. The Rapid Rural Appraisal methodology falls into this framework. The beyond farmer first agenda concentrates on the networks, power relationships and dynamic context of the rural farmers. Participatory Action Research, Participatory Rural Appraisal and Training for Transformation all share elements of this post-populist perspective (Cornwall, et al., 1994).
Table 1. Comparison of Populist and Post-Populist Approach to Rural Development

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Populist Approach</th>
<th>Post-Populist Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumptions</td>
<td>1. Rural communities are homogenous.</td>
<td>1. Different interests, goals, power, and access to resources among villagers and especially between villagers and outsiders.</td>
</tr>
<tr>
<td></td>
<td>2. Local knowledge is uniform and systematized and easily integrated with western knowledge.</td>
<td>2. Knowledge is multi-layered, fragmentary and diffuse with complex, inequitable, discontinuous interactions between local and external knowledge systems.</td>
</tr>
<tr>
<td>Process</td>
<td>1. Community consensus solutions to identified problems.</td>
<td>1. Conflict mediation and opportunities for dialogue between different interest groups.</td>
</tr>
<tr>
<td></td>
<td>2. Farmers involved in the planning and implementation of solutions.</td>
<td>2. Process learning and planning with dynamic and adaptive implementation of negotiated outcomes; collaborative work requiring dialogue.</td>
</tr>
<tr>
<td>Type of Research or Methodology</td>
<td>Positivist, hard-systems research (e.g. Farming Systems Research).</td>
<td>Post-positivist, soft-systems learning and action research (e.g. Training for Transformation).</td>
</tr>
<tr>
<td>Role of the Insider</td>
<td>Reactive respondent; passive participant.</td>
<td>Creative investigator and analyst; active participant.</td>
</tr>
<tr>
<td>Role of the Outsider</td>
<td>Invisible researcher, documenter; planner of interventions; manager of implementation; facilitates &quot;participation in&quot;.</td>
<td>Facilitator, initiator, catalyst; enabler; resource and visible actor in the process of action and reflection.</td>
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The Social Construction of Knowledge and Power

Much of the post-populist approach evolved from a more comprehensive view of knowledge, its generation, application and transmission in a rural context. The following segment will look more closely at the social construction of knowledge, examine the relationship people may have to their knowledge and analyze mechanisms for transmitting and sharing endogenous and exogenous knowledge.

The process of knowledge creation implies several interconnected elements: 1) an individual or groups' ability and strategy for applying existing knowledge and for absorbing new information; 2) a process for evaluating the relevance of newly introduced information; 3) the perceived value or symbolic benefit attached to specific technical material or innovation (Long and Villareal, 1994, p. 42). These and several other complex, interacting factors suggest that the generation and utilization of knowledge is not merely a matter of instrumentalities or technical efficiencies, but involves aspects of control and power which are embedded in social relationships. It is for this reason that there are likely to be significant differences between the different categories of actors involved in the production, dissemination and utilization of knowledge (Long and Villareal, 1994, p. 43).

The post-populist perspective supports the argument that so long as knowledge creation/dissemination is conceptualized solely in terms of the transfer of concepts, without considering the role of the human communicator and “... the transformation of meaning at the point of intersection” between world views, then the significance of
knowledge itself will be lost (Long and Villareal, 1994, p. 43). In the post-populist paradigm knowledge emerges as a product of the interaction and dialogue between specific actors. Given this construct of knowledge, it must be seen as multi-layered and fragmented and diffuse, rather than unitary and systematized (Long and Villareal, 1994, p. 43). This suggests that not only will insiders and outsiders have different parameters and priorities of knowledge, but also knowledge application will differ within epistemic communities. Therefore, the task of creating an enabling setting for true dialogue, which involves a free flowing exchange of information between different actors, appears difficult if not unattainable.

In order to explore the challenge of facilitating dialogue more fully, it is necessary to develop an analysis of interface situations. A social interface is a critical point of intersection between different social systems where structural discontinuities are most likely to be found (Long and Villareal, 1989). Discontinuities are characterized by discrepancies in values, interests, knowledge and power. Interfaces typically occur at points where different, and often conflicting, world views intersect. More specifically, they characterize social situations wherein the interactions between actors become oriented around the problem of devising ways of bridging or resisting each others social and cognitive worlds. Although the word interface connotes the image of a two-sided integration or confrontation, interface situations are much more complex and multiple in nature (Long and Long, 1992).

The interactions between government or outside agencies involved in implementing particular development programs and the beneficiaries of a farming
population cannot be described through the use of such generalized conceptions such as "state-peasant relations" or "local participation" (Long and Villareal, 1994, p. 44).

According to the post-populist perspective these interactions must be analyzed as part of the on-going processes of negotiation, adaptation and transformation of meaning that occurs between individual actors. An interface analysis between two epistemic communities (insider/outsider) is that much more complex in that it entails not only comprehending the struggles and power differentials taking place between the parties involved, but also identifying the dynamics of cultural accommodation that make it possible for two different world views to come together (Long and Villareal, 1994). Deciphering interactions is a difficult task, but one which is central to understanding the intended and unintended results of both a top-down or bottom-up rural development strategy.

Knowledge as a Dialogical Discourse

The concept of horizon consists of more than an individual's accumulated experience but includes an individual's relative awareness and attitude towards it. "A person who has no horizon is a man who does not see far enough and hence overvalues what is nearest to him. Contrariwise, to have an horizon means not to be limited to what is nearest, but to be able to see beyond it." (Gadamer, 1975, p. 269). Gradually, as an individual or group comes to critically understand the other groups' knowledge, a "fusion of horizons" occurs (Gadamer, 1975, p. 264). However, a complete fusion can never be achieved for as Gadamer points out, even when one understands the other, she or he will understand differently (1975, p. 264).
This iterative process by which understanding emerges is one which Gadamer refers to as the "hermeneutic circle" or, as Clifford Geertz prefers, "dialectical tacking" (Geertz, 1983, p. 69). Geertz describes this tacking as between the "most local of local detail and the most global of global structure in such a way as to bring both into view simultaneously" (Geertz 1983, p. 239). It is similar to Paulo Freire's concept of "action and reflection" (1972, p. 41). It consists of living an experience immersed in the view of the other then reflecting on that experience in order to comprehend it more fully. Rather than a circle it is more of a learning spiral in which each experience and reflection cycle brings two individuals or groups closer to a fusion of the horizons. According to Geertz understanding can only happen if an individual delves into the lifeworld and consciousness of another then reflects upon it back in his or her own (1983, p. 69). The lifeworld of an individual consists of much more than simply her or his accumulated experience and social inheritance, it includes the dynamic process of continuous reflection upon that experience and tradition (Seur, 1992). All individuals share smaller or larger aspects of their lifeworlds with those from common communities. Even apparently disparate groups usually share some lifeworld elements and some grounds for establishing communication (Seur, 1992).

Herein lies the challenge to development, for development practitioners (extensionists, researchers, social service agents) and the beneficiaries of development to come to a fusion of horizons. Each individuals' lifeworld is complex, dynamic and largely untenable, yet it is the basis of all of one's action. This is why it is so difficult to interpret human action and why small farmers cannot be expected to provide simple transparent
accounts of their activities. Like the rest of the world, farmers in Central America learn mostly by doing. This means farmers operate primarily at the level of practical consciousness, so that they know what they are doing but they are not accustomed to articulating the experience.

Human beings can in some degree - fluctuating according to historically given circumstances - give accounts of the circumstances of their action. But this by no means exhausts what they know about why they act as they do. Many most subtle and dazzling intricate forms of knowledge are embedded in, and constitutive of, the actions we carry out. They are done knowledgeably, but without necessarily being available to the discursive awareness of the actor... Any analysis of social activity which ignores practical consciousness is massively deficient (Giddens., 1984, p. 63).

**The Challenge of Deciphering Rural People's Knowledge**

A broader view of knowledge, its generation, transmission and application, suggests a range of issues relevant to participatory development strategies. Knowledge is held, controlled and generated by different people in a community. A pluralistic view of knowledge generation is an essential component of understanding local knowledge systems. The oversimplification inherent to the discourse, such as labeling rural people's knowledge as a unit, presents a problem in itself. If there is a consensus among development practitioners and academics that farmer's knowledge should come first, this begs the questions, "Which farmer?" Male or female? Rich or poor? Old or young? Influential or powerless? Scoones and Thompson suggest that, "Since knowledge is socially and politically constructed, it requires a socially differentiated, politically astute analysis to comprehend" (1994, p.26).
Understanding the processes of knowledge generation and its application on the farm and in the community has become an important focus of social scientists involved in agricultural research. Farmer experimentation is often promoted as a process to encourage a more participatory partnership between the researcher and the farmer (Fairhead, 1990).

Simply asking people, or inferring particular structures of knowledge from observation may be inadequate for understanding. Knowledge is tied to action. But what people "do" is not necessarily what people consciously "know". Knowledge may be articulated in many ways. In some instances, explanations for practices may be incompletely articulated or idealized; in others metaphors may be the most significant mode of transmission. Van der Ploeg describes an instance where Andean farmers confronted with a huge variety of different agroecological conditions, evaluate, cultivate and improve each of their plots using an extensive cluster of metaphors (1989, p. 148-9). The distinction between fria/caliente (cold/hot) is used to characterize certain aspects of what we would call soil fertility. It refers to the amount of nutrients and humus in the subsoil. Dura/suave (hard/soft) is another conceptual metaphor, which refers to the degree to which the soil has been tilled in previous years. It also communicates another important meaning, the degree to which a particular farm plot has been "cared for" and therefore the degree to which the plot may be considered as "grateful" (van der Ploeg, 1989). Although these descriptive characteristics lack precise quantification, they did not prevent farmers from assessing the overall condition of specific plots. In fact, Van der
Ploeg suggests that it is precisely the vagueness and qualitative character of these terms that allows for farmer interpretation and change (1989).

For several reasons, local knowledge and methods are often expressed in terms which outsiders can find difficult to decipher. Locals may view their agricultural or natural resource utilization methods as routine or unsurprising. As Richards pointed out in a previous case study, outsiders attempting to "scientize" local agriculture may describe certain methods in terms of crop rotations, or inter-cropping patterns (1989). These can give false impressions, as they may not reflect the wide variety of actual practices that arise through a series of reactions to uncertain ecological and social circumstances, as opposed to a rational, preconceived farm plan (Scoones, 1994, p. 26).

Transmission of Knowledge and the Hidden Transcript

Knowledge is not evenly distributed. Different individuals are recognized as "specialists" in particular fields and are key in the transmission and interpretation of knowledge within a community or family (Feierman, 1990). The dynamics of this knowledge have a political dimension, which includes control over the flow of and interpretation of information (Scoones, 1994).

The impression of local people passively receiving external knowledge, or at best as reacting to external initiatives, is prevalent in the literature (Salas, 1994). The paradigm assumes that the process of knowledge dissemination involves the transfer of one body of knowledge from one individual or social unit to another. Paulo Freire first described this one way educational process as "banking education"(1972). Dissanayake is one of several researchers who has written extensively about the critical limitations of this perspective as
it applies to field research and extension and labeled the phenomena as the
"transportational paradigm" (1986, p. 280). The image of peasant culture as inert is
equally common. Similarly, social scientists often label individuals or communities
pursuing a subsistence livelihood as "powerless" or "subjugated" or "repressed" within
specific circumstances and do not consider their potential involvement in various forms of
active resistance (Scott, 1985). Conversely, the "powerful" do not always control all
aspects of social life, nor do they recognize the degree to which they themselves are
influenced and affected by the actions and agendas of the "oppressed" (Scott, 1985).

James Scott has written extensively on power relationships between the oppressed
and the oppressor. He coined the term *hidden transcript* to describe the process that
occurs in nearly all authority/subordinate relationships in which a portion of both actors' opinions, beliefs, ideas and values (their *social transcript*) are not revealed (Scott, 1990). In any social situation that contains a perceived power differential, the oppressed tend to
reveal only the portion of their *transcript* which is safe and appropriate. The greater the
disparity in power between two individuals or groups, the greater is the proportion that is
likely to remain concealed (1990).

This phenomena is frequently cited in the agricultural extension literature. There
are countless examples in which social scientists tried to decipher the elusive, often
ambiguous answers of rural people to specific questions about their livelihoods and
agricultural methods. In her autobiography Rigoberta Menchu sheds some light on the
indigenous attitude toward outside knowledge (Burgos-Debray, 1983). There is an
existing complex organizational structure, and an advanced consciousness about the reality
in which rural people live that is purposefully not revealed to an outsider. Menchu describes this phenomena and hints to one underlying cause in the following excerpt from her book:

... Discrimination had made me isolate myself completely from the world of our compañeros ladinos. I didn't express certain of my attitudes but they were nevertheless there, like a thorn in my heart, from having repeated so many times: 'They are ladinos, they can't understand because they are ladinos.'... This is why Indians are thought to be stupid. They can't think, they don't know anything, they say. But we have hidden our identity because we needed to resist, we wanted to protect what governments have wanted to take away from us... (Burgos-Debray, 1983, p. 168).

A deferential, submissive reaction on the part of the local farmer is usually the case, when an extension worker presents the latest technical message (Scoones, 1994, p. 27). These are examples of the hidden transcript work.

It is helpful to consider a continuum from free dialogue between equals described as the ideal speech situation by Habermas (1984, 1987) in which all actors have the opportunity to express themselves free from the threat of unequal power relationships all the way to a hierarchical, power-laden relationship in which the only acceptable behavior is silent deference resulting from fear.

The hidden transcript thus represents the component of the oppressed's interaction with authoritarian groups, which for reasons of repression cannot be openly expressed. What domination achieves, in this context, is the fragmentation of discourses, so that much of what may be interpreted as a cohesive and integrated statement is actually sequestered and remains hidden from the outsider.
Barrington Moore described the situation in stratified societies as a continual process of redefining the limits of obedience and disobedience. Although there are limits on what dominant and subordinate groups can do, these limits are not clear-cut and fixed (Moore, 1987:84). This dynamic view of power and knowledge occurs within socio-political context of actors and their institutions. Such a view challenges many dependistas (advocates of the dependency school of economic development) and other political economists who argue that change can only happen through macro-structural change.

**Hermeneutics and Its Relevance to Knowledge Generation and Dissemination**

The different and sometimes conflicting paradigms of outsiders and insiders represent obstacles to development, and overcoming these barriers is the domain of hermeneutics (Graybill, 1995, p. 26). Hermeneutics is concerned with the interpretation and understanding of texts; however, the concept has been expanded to include the act of interpreting the world. "The act of interpretation is considered to be the most basic act of human thinking; indeed existing itself may be said to be a constant process of interpretation" (Palmer in Graybill, 1995, p. 27). Perhaps the most relevant application of hermeneutics to development is that it establishes the principle that individuals can only come to understand others through their own experience. No social experience can be defined as a static map, but only as a "living tradition" (Gadamer in Drinkwater, 1994, p. 39). Similar to Fals-Borda's concept of vivencia (1991, p. 2), a living tradition "is a complex phenomenon, reflectively appropriated by individuals and thus always only partially grasped and always evolving" (Drinkwater, 1994, p. 39). Thus, neither the development practitioner nor the rural farmer will ever completely grasp how their own
experience influences their understanding of others and their situations. Hermeneutics presents the methodological paradox of social understanding being restricted to the historical experience of the interpreter. The only way to truly understand any social setting is through those that live it, but researchers or interpreters are constrained by the extent to which they are aware of their own tradition.

Giddens has described two hermeneutic forms or the "double hermeneutic" that is involved in all sociological interpretation. The first hermeneutic is the researcher's or interpreter's direct attempt to understand social action; the second is the reader's or listener's attempt to understand the presenter's conveyance of that understanding (Giddens, 1976, p. 162). An important component of understanding or knowledge is the prejudices that each individual brings into an interpretive situation. The prejudices can prove to be restrictive or enabling. In an essay on Gadamer, Outhwaite clarifies the enabling role of prejudices in an encounter with others.

...Gadamer's notion of engagement helps us to understand the consequences of the fact that we are rooted in the social world. The fact that we ourselves are human beings makes it possible for us to understand what it is like to be another human being, what it is like to hold the beliefs which other human beings hold, and so on. But this also means that we cannot simply record, in an objective and value-free way, the practices and beliefs of other human beings. The social scientist does not go out into the field as a tabula rasa and return with an account of what it is like to be a European car worker or an African peasant; it is precisely the encounter between the social scientist's own beliefs and practices and those of the people he or she is studying which makes up whatever understanding we can have of another social reality (Outhwaite 1985, p. 29).

A simple example might be an extensionist who automatically assumes that a farmer who does not adopt a new agricultural technology is backward, inefficient and
ignorant. This extensionist is not going to learn much about that farmers' situation. On the other hand an extensionist who takes a broader perspective and sees production activities as the outcome of physical, cultural, economic, technological and institutional factors is more likely to identify with a farmer's decision to adopt or not adopt a certain technology. Because understanding is so contextual and dependent on individual experience, hermeneutics reinforces the perception that knowledge is never completely objective nor wholly subjective.

Knowledge Networks

From his fieldwork with cassava producers in the Dominican Republic, Box described the concept of knowledge networks (1989, p. 67). He used this concept to describe individual and group strategies for communicating, legitimizing and segregating information. Rather than a single dominant knowledge network there are many complex networks, which "...lack articulation among each other" (Box, 1989, p. 67). In his study, the networks of the participants varied so greatly that they did not allow for communication and interaction between the parties. Box identified a key problem for the analysis and management of knowledge systems, that was the fragile, changeable or non-existant nature of communication channels between actors or groups (Box, 1989, p. 67).

There are important elements in the nature and operation of knowledge networks within the same farming populations. Studies of communicator networks have shown individuals or groups often become the centers of defined networks and points of articulation with wider networks (Long and Roberts, 1984). Norman Long has labeled
these centers as "gatekeepers" to structurally more distant networks. Gatekeepers play a strategic role in both facilitating and blocking the flow of information and thus are of crucial importance in understanding the functioning of knowledge networks (Long and Villarreal, 1994, p. 46). Gatekeepers have been shown to be particularly significant for obtaining access to diverse fields of information such as protocols and prices in dispersed market locations (Milardo, 1988, p. 17).

An important function of networks in the process of knowledge generation is to provide social support that motivates individuals to act or not act on information. This presumes the existence of a relatively powerful social network capable of applying varying degrees of influence over its members (Moore, 1973). These and similar studies suggest that social networks play an important role in how a rural community absorbs or resists new information and adapts to or resists changed circumstances (Long and Villarreal, 1994, p. 47).

Knowledge Heterogeneity and Agents of Change

Most of the recent literature indicates that farming populations in less developed countries are essentially heterogeneous in terms of the strategies they adopt for solving problems. Different ecological, demographic, economic, political and socio-cultural conditions combine to generate different patterns of subsistence livelihoods. Implicit in this process is the social meaning that agricultural knowledge acquires depending on how it is used. Adopted technology is constantly being modified or transformed to fit with the livelihood strategy of a particular household (van der Ploeg, 1989). Rather than being a strictly technical endeavor, a farmer's process for incorporating a new technology into an
existing system occurs within the context of interacting social domains, including: family, community, market, government and nongovernmental organizations. For this reason the farmer's decision is based not only on individual preference, available resources and knowledge but also on appropriate normative and social obligations for organizing the process of production and reproduction (Long and Villareal, 1994, p. 47).

The post-populist perspective views the farmer as an active strategizer who problematizes situations, processes information and brings together the necessary elements for securing a livelihood. Therefore, regardless of the pressure from external knowledge systems, the farmer is ultimately responsible for constructing his/her own world (Long and Villareal, 1994).

Central to the notion that farmers create their own lifeworld, is the concept of human agency. Human agency refers to certain individuals' or groups' capacity to process social experience and devise strategies of coping with life even in the most extreme conditions (Long and Villareal, 1994, p. 48). Agency is more than an individual characteristic or skill, it is composed of social relations and can only become effective through them. The ability to influence others to adopt a new technology depends on "the actions of a chain of agents each of whom translates it in accordance with his/her own projects...and power is composed here and now by enrolling many actors in a given political and social scheme" (Latour, 1986, p.264). In other words, agency depends crucially upon the emergence of a network of actors who are willing to at least partially adopt a project. Effective change agents must be able to either generate or modify a network of social relations and introduce new information through "nodal points" of
interaction (Clegg, 1989, p. 199). To accomplish this change agents must influence the
collection of social meaning around particular actions, ideas or information. Particular
development methodologies (or ideologies) become strategic tools in the hands of the
change agents attempting to change existing knowledge systems (Long, 1989 and van der
Ploeg, 1989).

This process is illustrated in Pieter de Vries account of how subsistence farmers in
Central America came to validate only scientific definitions of agricultural development.
He showed that although farmers have spent their whole life resolving production
problems using traditional methods, scientific knowledge introduced by extensionists
gradually usurps local knowledge (1992). Local knowledge becomes superfluous to the
model of modern production, and development projects become a kind of commodity
controlled by outsiders. In this way outside interests gradually come to govern the type of
relationship and the kind of negotiation that happens between extensionists and farmers
(de Vries, 1992). Science and modern ideologies eventually come to dominate the
interaction between state agents and the locals to such a degree that it effectively prevents
the exchange of any knowledge. This creates what van der Ploeg termed a "sphere of
ignorance" whereby small farmers are labeled "invisible" in contrast to the "experts" who
are visible and authoritative (1989).

This description oversimplifies a very complex interaction. Far from being a clear-
cut, "mechanized imposition" from an external, dominant knowledge system, the process
entails subtle negotiation over concepts, meanings and power which, in turn, are
internalized to varying degrees by the different actors involved. Thus, the ability of
outsiders to change the nature of rural livelihood systems is contingent on two elements: 1) their skills in handling interface encounters with farmers, and 2) the ways in which power relations influence the context of knowledge generation and dissemination (Long, 1994, p. 49). Ultimately, small farmers assimilate information from each other, as well as from external sources, in an attempt to create knowledge that effectively addresses the challenges they face.

**Establishing a Theoretical Framework for Methodological Design**

There is no simple "techno-fix" just as there is no simple "participation fix" to the agricultural problems of the world's resource poor farmers. Every system of knowledge, agricultural science and rural peoples' knowledge included, has its own epistemology, its own theory of what constitutes and what counts as knowledge. The shortcomings of positivist, rationalist, western scientific epistemologies have been widely discussed and debated for years (Sayer, 1992).

This critique undermines the assumption of a positivist view of investigation that sees knowledge as a tangible stock or store to be tapped, extracted and documented. It also suggests that the process of knowing should be seen as engaged, value-bound and context determined, rather than detached, value free and independent of context. The human mind is not simply a mirror that accurately reflects a reality out there (Rorty, 1980). Interpretation, translation and representation are social acts that are not neutral and objective. While humans cannot escape the constraints of their own language or their own ways of knowing, they can acknowledge that these provide only partial views of their world and that a multiplicity of other equally valid ones also exist (Hacking, 1983).
It is also essential to ask how power affects knowledge. Michael Foucault observed that the criteria of what constitutes knowledge, what is to be excluded and who is designated as qualified to know involves acts of power (Foucault, 1971 in Drinkwater, 1994, p. 24). Arturo Escobar pointed out that power differences and struggles over social meaning are central to an understanding of knowledge processes (1994). Forms of discourse come into being, evolve and survive or decline because they are used by people in a dynamic interplay with one another and with their physical environment. Thus, as Roy Bhaskar indicated, terminology, knowledge and power are both ever present conditions and continuously reproduced outcomes of human agency (1979).

To explain the direction of change it is necessary to introduce power into the equation and explore the relationship between power and knowledge. The purpose for reviewing knowledge systems is to be able to better understand internal processes, then use that information to expand effective strategies that resist a dominant or potentially disempowering external discourse of formal research or extension (Drinkwater, 1994, p. 25).

**Discourse of Empowerment**

The concept of empowerment has gained nearly mandatory status in the current development discourse (Kronenburg, 1986). It is used in conjunction with "grassroots alternative development" to indicate any development strategy which diverges from conventional, top-down development interventions. The difficulty is that empowerment nevertheless seems to connote power injected from the outside, even though it is aimed at shifting the balance of forces towards local interests. According to Richards it implies the
idea of empowering people through "strategic interventions by enlightened experts who make use of people's science and local intermediate organizations to promote development from below" (1985, p. 157 in Long, 1994, p. 51). Empowerment is often presented as a way of substituting a "blueprint" approach of project development with a "learning" approach (Korten, 1987). This means that projects still do not escape the interventionist undertones inherent to all development. That is, development programs touting empowerment still tend to evoke the image of more knowledgeable and powerful outsiders helping the powerless and less sophisticated. Development schemes that proclaim empowerment as the goal, usually imply attempts to give the less powerful the necessary skills and resources to participate in the economic and political structure of the powerful.

This scenario presents a contradiction that begs the question: To what extent does an external intervention with the intent of enabling communities to control their own development actually influence the goals and outcome of the process? Even the most well-intentioned development practitioners, using non-directive methodologies, are constantly faced with a dilemma. Either allow community dialogue and action to follow its own course or control the process by limiting discussions and activities to those which outsiders judge to be relevant.

Deconstructing the concept of empowerment exposes the multifaceted nature of power inherent in the relations between development practitioners and their local "partners" in participatory projects (Long, 1994, p. 51). It also shows how external institutional commitments and hegemony intrude into this arena and shape the outcomes of
participatory activities. The question of empowerment ultimately brings the analysis back to power and the social construction of knowledge.

**Participatory Methodologies for Rural Development**

Since the inception of foreign aid programs in the 1950s, development planners and practitioners have designed and implemented numerous methodologies for assessing development needs at the community level. Several methodologies have been adopted and modified from the field of agriculture research and extension. Most of the older, prior to 1980, conventional approaches and methods emerged from the industrial and green revolution agricultural tradition. Conventional approaches to agricultural research and extension were focused on and limited to increasing agricultural production by introducing new technology. Methodologies within the context of a rural community consisted of variations of the following process: 1) gathering technical data about agricultural production; 2) analyzing that data externally (at an agricultural research station or other institution); 3) based on that data, developing a new technology or practice that would increase production; and 4) introducing that new technology to the small farmer.

Since 1983, when Robert Chambers published his book *Rural Development: Putting the Last First*, several changes have occurred. Growing numbers of professionals and researchers have promoted and attempted to adopt a farmer-first, or populist approach to development. This approach recognized the inherent complexity of subsistence farming within a resource poor, risk prone, diverse context. The farmer first movement stressed the importance of giving priority to farmers' agendas and knowledge.
and considering the implications of involving outsiders in the development process. As a result, a new wave of methodologies evolved based on the participatory philosophy of involving the small farmer in his/her own development.

In the following section, four different participatory research methodologies for grassroots community development are critically reviewed. Although rural development methodologies are not limited to agricultural research and extension, the participatory approaches that are reviewed here have evolved from the context of state sponsored extension agencies or other private voluntary organization working with rural communities dependent on subsistence agriculture. After clarifying the role of methodology in rural development from its roots in agricultural research and extension, then summarizing and comparing six different approaches, some of the challenges to the design and implementation of participatory methodologies will be considered.

Methods and Methodologies

It is important to distinguish between methods and methodologies. Methods are simply the tools of data collection and information exchange. Methodologies provide the researcher with a framework to investigate, analyze and organize information about an issue (Cornwall, 1994, p. 98). Methodologies shape and form the process of research.

By engaging in the process of conceptualizing research, the researcher has already limited the outcomes and defined the approach to achieve these outcomes. In the past, research for assessing development needs has been limited to the collection and transfer of facts. Methodologies have been viewed as a neutral means to strategically organize methods to maximize the data collection process (Cornwall, 1994, p. 98). Yet, clearly
different methods (interviews, focus groups, surveys) can be used differently by each practitioner, which may result in divergent or conflicting information. The choices made during the implementation of the methodology are derived from individual values, beliefs and assumptions. Research within the positivist paradigm is considered objective and unbiased; therefore, these aspects often go unquestioned and unacknowledged, yet influence both the procedures and outcomes of research.

To this day, within many development institutions the dominant assumption is that research methodologies, needs assessment strategies, or training curriculums are selected solely on the basis of their appropriateness to the particular project goal. Seldom do researchers or development planners acknowledge the institutional constraints, such as time, finances, conditionality of donors that may influenced their decisions. Sometimes researchers are not even aware of the extent to which more personal criteria, such as over confidence in a single methodology, resistance to change, pressure from superiors may have affected their selection. The choice of methodology is as Hesse suggested, a decision which is both political and personal (1978).

Prior to the farmer-first populist approach, conventional methodologies to agricultural research and extension were based on several assumptions. These assumptions limited the ability of researchers and development planners to deal with complex and changing realities. The prevailing assumption being that agricultural development consisted of a linear sequence of events focused on transferring improved agricultural technology to poor farmers in the field (Freire, 1973). There was a clear separation and linear sequence that governed the transfer of knowledge from the scientists
who generated knowledge in agricultural research stations, to the extensionists who transferred the technology to the field, to the small farmer as the passive recipient. Korten summarized this phenomena as "the generation of knowledge being separated from its use in decision making and implementation" (1980). Clearly, acknowledging existing agricultural systems or recognizing farmers' accumulated experience, were not a necessary part of the research and training methodologies that emerged from this perspective (Cornwall, 1995, p. 99). Conventional methodologies reduced the complex dynamics of farming to technical procedures. Needless to say, there are abundant accounts of carefully designed and well-intentioned agricultural development projects that failed because they viewed agriculture as a technical activity rather than a social process (Morris, 1991).

**Defining the "Participation" in Participatory Methodology**

The concept of participation has acquired an ambiguous identity in the development field and as been used to describe the range of participation, from cooperation to ownership. The adoption of participation as a guiding concept has been driven by both ideology and pragmatism (Farrington and Bebbington, 1991). An explicit aim of the *farmer first* movement is to ensure that development programs reach the poorest of the poor and methodologies consistent with this ideology require that the intended beneficiaries be involved in the process. There is also an economic consideration in that project managers recognize that participation contributes to more effective and sustainable project outcomes (Cornwall, 1994, p. 102). As a result donor organizations often make participation a condition to rural development project funding. Participation has been mechanistically incorporated into almost every kind of rural development project.
However, similar to other terms which have acquired sudden “fashionability” with the emergence of the populist movement, participation hosts a myriad of interpretations. Often the actors involved are resistant to accept a longer time table or relinquish project control so local participation is limited to a nominal level.

David Evans distinguished at least three levels of participation: 1) *nominal*, in which participation is limited to passive involvement in a project; 2) *consultive*, in which decision-makers seek advice and suggestions from locals; and 3) *responsible*, in which locals are make decisions and control project outcomes (1977, p. 29-30). Farrington, *et al* expanded on this typology which they identified as "depth of interaction" running on a continuum from shallow to deep (1993). They highlighted organizational issues, arguing that deeper levels of participation tend to rely more heavily on group rather than individual approaches. Mario Acevedo argued that "one must look into the power relationships between and within institutions and communities, reassess the role of popular culture and traditional knowledge in these institutions and communities, and finally recognize any socio-economic and political constraints that might limit participation in any given project" (Acevedo, 1992, p. 2).

Many of the new methodologies that emerged from the *farmer first* movement do contain elements of a substantive commitment to involve small farmers in their own development. Despite the rhetoric of some approaches, they have brought significant innovations and challenges to the transfer of technology paradigm. Although all the methodologies strive toward some form of community empowerment, few accommodate or respond to the challenge of a "deep" level of participation.
In many of the methodologies, rural people's participation is limited to providing information to researchers, who do the analysis and generate solutions for the farmers. In the RRA methodology for example, external agents control the process from gathering the data to analyzing it and making recommendations. In PRA and TFT the aim is to enable small farmers to explore their aspirations, identify their own problems and pose their own solutions, through actions they generate themselves.

Review of Participatory Rural Development Methods

In the following section, I review and analyze the advances and shortcomings of four different methodologies: RRA, PRA, TFT and PAR. Each approach allocates specific roles for the researcher or other development practitioner and calls for a different level of local participation and commitment.

1. Rapid Rural Appraisal (RRA)

Growing dissatisfaction with a common phenomenon in the field of rural development labeled "rural development tourism" led to the emergence of Rapid Rural Appraisal (RRA) in the late 1970s (Carruthers and Chambers, 1981). In rural development tourism, the "tourists", or development planners, arrive in a rural village accompanied by an extensive and expensive entourage, spend a short time chatting with community leaders, then return home and recommend project funding based on that single encounter (Chambers, 1983). RRA was intentionally developed to counter the inherent bias and inequalities that inevitably resulted from the "tourism" approach.

RRA stresses cost effective trade-offs between the quantity, accuracy, relevance and timeliness of information. It combines a range of methods to maximize cumulative
data collection in a short period of time. Because it involves a multi-disciplinary team, RRA is able to capture a wide range of accurate information that characterizes a community's social and ecological context. Ideally, RRA teams (typically a team consists of anthropologists, agronomists, sociologists and other experts) enter a community free from the limitations of structured questionnaires or surveys and assume the role of eager students with the mission of learning as much as they possibly can from the locals. RRA employs a rich menu of visualization, interviewing and group techniques to facilitate data gathering. Some of the more common methods include: 1) participatory mapping and modeling; 2) aerial photograph analysis; 3) seasonal calendars; 4) semi-structured interviews; 5) transect and group walks; 6) wealth ranking; 7) villager presentations; 8) participant observation in local activities and several others. Rather than answering a stream of questions directed by the values of the researcher, local people present their ideas in a form they can discuss, modify and extend. They become creative analysts and presenters, rather than reactive respondents.

Although locals are involved in all aspects of the data gathering, ultimately it is the RRA researchers and planners who select and analyze the information. The amount and the manner with which information can be gathered using RRA methods belies the more complex political and social context in which such interactions take place. There is an assumption that if an external researcher behaves appropriately and uses data gathered by locals then he/she will not bias the information. And here enters the dynamic of Gadamer's hermeneutics, Scott's hidden transcripts and the internal biases inherent to any insider/outsider relationship. Although RRA offers a creative approach to data gathering
it still does not completely address the power dynamic between insider and outsiders. RRA offers a creative approach to information sharing and a challenge to prevailing biases and preconceptions about rural people's knowledge.

2. Participatory Rural Appraisal (PRA)

By the late 1980s, users of RRA had been influenced by the farmer first movement (Chambers, 1989), applied anthropology (Brokensha, 1980; Rhoades, 1987), and participatory action research (Rahman, 1984; Gaventa and Lewis, 1991). The focus shifted from rapid collection of data by researchers and planners to facilitating farmers to generate, represent and analyze their own data (Ford, 1992). This implied a role reversal for farmers and development workers and developing methods that correspondingly changed the behavior and attitudes of outsiders and insiders. The new term applied to reflect this ideological shift in RRA was Participatory Rural Appraisal (PRA). Advocates of this methodology claim that PRA accomplishes the goal in which the participants themselves control the production of knowledge and the generation of potential solutions (Cornwall, 1994). PRA combines research with action, creating opportunities for mobilizing local people for joint action (Devavaram, 1991).

PRA intentionally emphasizes local knowledge. It presumes that rural resource users have considerable knowledge about their problems and are familiar in solving them using local resources. "PRA further assumes that rural residents may not appreciate the enormous power that this information can yield nor how best to organize it to bring together interests both inside and outside of their community" (Ford, 1992, p. 4). PRA strives to ..."systematize existing knowledge in ways that communities will be able to
strives to ..."systematize existing knowledge in ways that communities will be able to \textless control it" (Ford, 1992, p. 4).

PRA attempts to motivate rural communities to mobilize themselves toward action to resolve problems. By selecting and working with natural community leaders or agents of change, PRA attempts to build consensus on what a community wishes to do and organizes action around that action. An important assumption to the PRA process is that rural communities can design and implement projects acting primarily on their own resources.

In PRA, the role of government extension offices, NGOs and other international groups is to provide critical technical, financial or managerial assistance that is unavailable to rural communities. Proponents of the PRA process claim that it creates a setting in which insiders and outsiders share goals and agree on actions to meet common needs.

PRA uses criteria taken directly from RRA to assess the merits of village projects and action. The three principal criteria include: equatability, productivity and sustainability. Equatability indicates the methodology's intention to emphasize actions that spread the benefit as far as possible within the community. Productivity means that local participants consider the impact that an action will have on the productive use of the resource base. Sustainability refers to the interest and capability locals have in maintaining a proposed project using their own resources without depleting community resources.

PRA is currently one of the most popular methodologies being applied globally. Much of its popularity has been attributed to the fact that PRA intentionally attempts to hand over control of the process to the participants. However, like any other
methodology, the methods can be applied mechanistically to fulfill almost any agenda. As a result, PRA is becoming a widely accepted label for quick and dirty research (Chambers, 1997).

3. Training for Transformation (TFT)

The TFT methodology was first developed and implemented in Kenya in 1974 and is still commonly used in grassroots organizing throughout East Africa. The methodology focuses on building confidence and trust among participants by identifying and responding to local concerns.

The approach brings together Paulo Freire's work on critical awareness, human relations training and group work, organizational development, social analysis, and the Christian Concept of Transformation (Hope, 1984). These sources are depicted as streams coming together into a river of Development Education and Leadership in Action training that then forms a DELTA of sectorally-divided issues (literacy, agriculture, health, management, family and social problems, basic Christian communities). Facilitators conduct listening surveys in communities and prepare problem-posing materials or "codes" to stimulate discussion in learning groups about local problems. Every training session concludes with an action plan to ensure that organized measures are taken to address a problem and to concretize the action reflection cycle.

The strength of the TFT methodology is that rather than prescribing or imposing external solutions to development problems, the training centers on participants' own experience of their problems. By building confidence and providing an opportunity for
dialogue, TFT has been effective in involving marginalized groups in their own development.

Although the TFT methodology places the participants' own experience at the core of the training, it is still the TFT trainers who initiate and facilitate the process. Because the trainers select and provide the generative codes for discussion, the extent to which outsiders define the process can vary greatly. Another important obstacle to attaining an *ideal speech situation* is the methodology's emphasis on achieving consensus. This emphasis may avoid confronting power relations which established hierarchies of interests and agendas within the community. Without confronting this issue, rather than giving a voice to the disenfranchised, the methodology may inadvertently perpetuate their disenfranchisement by acknowledging the existing power structure.

4. **Participatory Action Research (PAR)**

Participatory Action Research (PAR) was developed during the 1970s (Fals-Borda, 1979 in Maguire, 1987, p. 3) and draws together both the personal and the political. It recognizes the marginalization caused by positivist science and its creation of ignorance, and challenges relations of inequality by restoring oppressed people's self-respect and voice. Its aims are explicitly political, as PAR focuses on the experiences of poor and exploited groups. PAR seeks to disrupt the hegemony of western science and official histories in which the contribution of the poor plays no part (Cornwall, 1994, p. 110). In PAR knowledge is created, organized and applied to confront dominant power structures.

Participation in PAR means breaking out of relations of dependency to restore to individuals and groups their worlds (Freire, 1972). Local people are involved at all stages
in research. Rather than being the objects of research, locals produce and own their information. In theory, the initial agents of change "become redundant" and the transformation process develops without the presence of external agents (Fals Borda and Rahman, 1991).

Practitioners of PAR stress the importance of recovering local's own history in the process of collective confidence building. Some of the methods used in PAR include: 1) collective research; 2) historical reflection; 3) recovery and validation of folk culture; 4) production and dissemination of new knowledge (Cornwall, 1994, p. 110).

The principles of PAR have inspired recent development in other methodologies, such as PRA (Cornwall, 1994, p. 107-109). Yet because it explicitly confronts the politics of inequality it is often perceived as a profound threat to established interests, both within the community and to external institutions (Fals Borda and Rahman, 1991). PAR's goals of societal transformation is a long term endeavor for which the personal and political commitment of external agents is vital. It requires the researchers or any external change agent to be leaders, willing and able to hand over total control of the change process.

The amount of literature on the theory and practice of PAR is abundant and goes into much greater depth than the summary presented here. This overview is intended to present the profound impact that the PAR school is having on the process of redefining research, extension and rural development.
Table 2: Comparison of Some Participatory Methodologies in Rural Development

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Time</th>
<th>Diversity/ Location</th>
<th>Intra-Community Interaction</th>
<th>Insider/ Outsider Interaction</th>
<th>Control of Process/ Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Rapid Rural Appraisal (RRA)</td>
<td>Views rural development as a social process. Focuses on gathering information to apply outside solutions</td>
<td>Intentionally seeks out the &quot;poorest of the poor&quot;. All information is subject to the interpretation of the external researcher.</td>
<td>Interprets intra-community interactions based on qualitative data gathered by external researchers.</td>
<td>Highlights the importance of being aware of suspending biases. Local knowledge evaluated by outside researchers.</td>
<td>Outside researchers document community livelihood systems and introduce appropriate solutions. Consultative local participation.</td>
</tr>
<tr>
<td>2) Participatory Rural Appraisal (PRA)</td>
<td>Emphasis is on enabling participants to find sustainable solutions. Use oral history to link past experience to future solutions.</td>
<td>Gender and class analysis integral part of the procedure.</td>
<td>Several activities focus on interactions between community members. Can be used as a tool for analyzing intra-community conflicts but it is not intentional.</td>
<td>Outsiders lead locals through the process of validating their own experience. Outsiders maintain substantial influence over the process.</td>
<td>Outsiders train locals in participatory techniques for appraising community livelihoods and introduce appropriate solutions. Consultative local participation.</td>
</tr>
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Table 2 continued.

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>3) Training for Transformation (TFT)</td>
<td>Focuses on the process of coming to consensus and collective action toward long term, sustainable solutions.</td>
<td>Activities focus on building confidence and generating consensus among all participants. Because facilitators select “codes” and the emphasis is on consensus, diversity and power issues may be overlooked.</td>
<td>The focus is on relations within the community but tends to obscure conflict by emphasizing “consensus”.</td>
<td>Outsiders lead locals through the process of validating their own experience. Outsiders maintain substantial influence over the process.</td>
<td>Outside facilitators initiate the process for the community to reflect and dialogue about shared problems. Outsiders then facilitate collective action to resolve problems. Consultative/responsible local participation.</td>
</tr>
<tr>
<td>Participatory Action Research (PAR)</td>
<td>Participants gather information and act toward their own development well beyond the presence of an external agent.</td>
<td>Participants identify issues to be investigated and resolved. May reveal diversity within the community or may focus on external power relations.</td>
<td>Based on the assumption that conflict exists and must be addressed. However, participants identify issues and may avoid confronting some power differences among community groups.</td>
<td>Conventional insider/outside relationships are purposefully abandoned and their corresponding power relations are rejected.</td>
<td>Locals control the process of collective research and action. Challenge the inequality of the existing power structure. Responsible local participation.</td>
</tr>
</tbody>
</table>

**Potential Outcomes of Participatory Methodologies**

The preceding analysis shows how participatory approaches are evolving. They emphasize learning by doing and creating opportunities for rural people to control their
own development. It would not be appropriate to rank the approaches on any scale suggesting the superiority of one methodology over another. They were and are being designed and implemented in very different contexts to fulfill a wide range of needs. Although experiences with the these methodologies have usually been directed towards agriculture and natural resource management, variations exist to fulfill other development objectives such as addressing problems in community health. It is clear that many challenges must be met before any approach or combination of approaches can truly fulfill the original farmer first goal of enabling rural people to control their own development. One key and immediate challenge is gaining the political commitment and funding necessary to support such efforts. Another critical challenge is overcoming policies that work against participatory efforts for sustainable development. The new generation of participatory methodologies imply shifts of initiative and responsibility and require that established hierarchies focus their efforts downwards to the small farmers themselves.

Theoretical Foundations of Critical Pedagogy In Participatory Methodologies

Participatory rural development methodologies focus on issues of power and control. They are concerned with the nature of the social systems in which programs and projects are developed, rather than the technical and managerial aspects of organizations and projects. Central to participatory approaches is the belief that local people are capable of critical reflection and analysis and that their knowledge is relevant and necessary. The alternatives to conventional approaches to rural development are heavily influenced by the
work of Paulo Freire. His process of *conscientization* leads to understanding of the structural causes of poverty and builds consensus and social action based on collective knowledge.

**Paulo Freire’s Influence on Rural Development Methodologies**

Paulo Freire, one of the foremost educational philosophers of the century, has given us a revolutionary philosophical approach to social transformation that continues to shape the field of education. Through *Pedagogy of the Oppressed*, he introduced a dialectical mode of conceptualization that underlies the nature of all social relations (1972). Although Freire acknowledges the potential for human harmony, thus far in history, for the most part, social relations have been antagonistic. He describes a world consisting of unequal power relationships, collectively referred to as oppressed-oppressor relations. Systemic oppression is often so great that nothing short of abolishing the dialectical relation will improve the situation. Only when the domination of one group over another is eliminated is there a possibility for human beings to unite in love with a commitment to social justice (Allman, 1998, p. 10).

In Freire’s philosophical approach to education, the world in which we live, including social, political, economic and ecological systems, is historically based. The systems are open and susceptible to change. Human beings are defined by their struggle to learn, or their effort to name, or re-create, the complex world in which they live (Vella, 1995, p. 3). The fact that human beings change attitudes and behavior through education is a by-product of the true pedagogical goal. The real focus is on the transformation of
dialectical or unequal power relations, beginning with those that are inherent to traditional pedagogies, which are simply reflections of oppressive social systems. In a practical sense this does not mean that education is exclusively focused on changing the world. The intent is to prepare people, through dialogical problem-posing education, to collectively understand what needs to be changed to make their world more "human" than the existing oppressive situation (Allman, 1998, p.11). Freire called this process *conscientization*.

In his theory of education, no person is an "empty vessel" lacking knowledge. Every adult has a lifetime of valuable experiential knowledge and recognizing this fact is the beginning of the dialogical approach to learning. Both the educator and the learner are subjects of the process, and the traditional hierarchical relation between subject and object is negated. A more profound understanding of the learner's own knowledge and its origins is one of the primary outcomes of Freire's critical pedagogy.

The methodology is founded upon an iterative cycle of reflecting upon the action that informs one's experience or *praxis*. This process of open-ended, self-directed learning can lead to transformative action. Thus, learning occurs by critically reflecting upon what one already knows or one's own lifeworld. In true praxis, the process of action and reflection is assimilated and occur simultaneously and continuously. Freirian dialogue is also praxis, in that it is an equal exchange of knowledge, or a fusion of horizons, free from the dynamic of disparate power relations.

**David Kolb: Experiential Learning Theory**

Arising from the humanistic tradition of educational thought, Kolb’s most recent analysis of experiential learning theory also contains important concepts which contribute
to the overall theoretical foundations of critical education (1984). His work is based upon the work of previous human development theorists including Jean Piaget (1970), Kurt Lewin (1951) and John Dewey (1938). He was able to draw out the most salient points of his predecessors and distill it into the six key principles of adult learning:

1. Learning is a process not a product.
2. Learning is a continuous process grounded in experience.
3. The process of learning requires that the learner resolve the conflicts between dialectically opposed modes of interpreting the world.
4. Learning is a holistic process of adapting to the world.
5. Learning involves transactions between the person and the environment.
6. Learning is the process of creating knowledge.

From this set of characteristics, Kolb generates his own definition and explanation of experiential learning as being “…the process whereby knowledge is created through the transformation of experience” (1984, p. 38).

Kolb asserts that the process of human development and learning follows a continuous cycle of (a) individual experience which leads to (b) reflection about that experience in order to extract new insights and knowledge that are applied to (c) abstract conceptualization or generalization of the new insights in order to generate a tentative hypothesis of understanding that is followed by (d) application or active experimentation through experience, initiating the cycle once again (figure 1). Internal knowledge constructs are modified as learning and growth occur as a result of continuous passage through the experiential learning cycle (1984, p. 40-42).
Figure 1: Structural dimensions of the experiential learning cycle.
On the map El Salvador appears as an extruded remnant of land squeezed out from Guatemala to the west and Honduras to the north. Just over 150 kilometers of spectacular, largely undeveloped Pacific Coast line marks the country’s southern boundary.

Three distinct geographical zones make up El Salvador. First, a coastal plain running along almost the entire Pacific Coast. Second, a volcanic range cutting straight through the middle of the country. Third, an area of rugged higher mountains just inside the northern border with Honduras (Murray, 1997, p. 4).

With 5.6 million Salvadorans occupying its twenty-one thousand square kilometers, El Salvador is both the smallest and the most densely populated country in the continental Americas. The civil war forced at least one million Salvadorans out of the country, and displaced much of the remaining population to the south and west. At the end of the war two-thirds of the country’s people lived in its south-west quadrant, including greater San Salvador (Murray, 1997).

When the Spanish colonists arrived in 1524, dense tropical vegetation almost entirely covered the land, then called Cuscatlán, hampering the movements of the invasion
Figure 2. Map of El Salvador
force. Since that time, all but two percent of the original forest cover has been stripped away. Today the majority of El Salvador’s forest consists of coffee plantations. During the rainy season from May to October, El Salvador seems lush. But by the end of the dry season in early May, El Salvador looks more like the marginal lands on the fringes of one of the world’s great deserts.

High population density, agricultural modernization, industrialization, pervasive poverty and 12 years of civil conflict have placed substantial pressure on El Salvador’s natural resource base and environment. The result of this pressure has been extensive deforestation, loss of biodiversity, and reduced capacity of coastal fisheries (Barry, 1990, p. 133). Currently only 327,000 hectares, or about 12% of the total area of El Salvador, remains under forest cover. The increasing scarcity of fuelwood has caused a dramatic increase in the market price and in the average time spent by rural families to collect it (PROMESA, 1993, p.34).

The deforestation, in turn, has contributed to widespread soil erosion in El Salvador. It is estimated that more than 50 percent of all land suffers from severe soil erosion. Roughly half of the Salvadoran population depends on crops planted on steep slopes, which are vulnerable to erosion, for subsistence.

The unique set of social and political factors that led to such an extreme degradation of the natural resources that the majority of Salvadorans depend upon is the subject of this chapter.
History of El Salvador

Little is known about the indigenous society, which flourished on the coastal plain and the volcanic foothills on both sides of the Lempa from about 1200BC to 250 AD. It appears that a massive eruption of the Ilopango volcano around 200 AD, caused a natural disaster from which this pre-Colombian society never recovered.

By 600 AD, a Mayan culture with strong ties to the great Mayan civilization to the north became dominant on the western side of El Salvador. The Mayan influence did not spread to the eastern part of the country. This created a cultural distinction that has been a recurrent theme in Salvadoran history. The complex Mayan culture was an agricultural society based on the cultivation of corn. For a variety of reasons, Mayan societies throughout Mesoamerica began to experience serious social and economic problems in the ninth century (Murray, 1997, p. 6).

Over the next two centuries a new civilization, linked by language and culture to the Aztec civilization of Mexico, came to dominate the western part of the country. The indigenous Mexicans that accompanied the Spanish conquerors called its inhabitants Pipiles, the hispanisized Nahuatl word for children, because they spoke that language in a way that sounded child-like to the invaders.

In Cuscatlán, the Pipiles constructed a complex agricultural society. It included a multilayered class structure, cultivating a variety of crops and trading extensively. The central community of the Pipiles, also called Cuscatlán was located near the current site of San Salvador.
The Pipiles employed slash and burn techniques for the cultivation of primarily corn, beans and squash. The planting, cultivation and harvest of corn formed the foundation of their spiritual and economic life. Clearly, the Pipiles developed a powerful relation with their land (Murray, 1997, p. 6).

Pipil communities held land in common under the control of the local leader, who assigned land for family cultivation. Each family dedicated a certain amount of its produce to religious leaders. Slaves were forced to cultivate the land for the warrior class. Therefore, a few people were supported by the work of others, but there was no concept of private land ownership.

As in the rest of the Americas, the arrival of the Spanish in Cuscatlán imposed social and cultural changes at an unprecedented scale. Hernán Cortéz, leader of the Spanish invasion of Mexico, sent one of his trusted lieutenants, Pedro de Alvarado, to take control of Cuscatlán and convert its inhabitants to Catholicism. He was accompanied by an army of 250 Spaniards and 5000 indigenous Mexicans.

It took 15 years of repeated military campaigns for the Spaniards to finally take control of Cuscatlán. In the diaries of the Spanish officers, they described the defenders’ tactics of retreating into the mountains before their advance and resorting to ambush and other forms of warfare. These tactics were similar to those used by FMLN rebels in the civil war five centuries later. During the long struggle for control, the Spaniards renamed Cuscatlán, El Salvador (Murray, 1997).

The Spaniards established a colonial administration that would maximize the benefits to both the Spanish crown and individual leaders of the conquering army. Since,
unlike neighboring regions to the south, El Salvador had little mineral wealth, the new administration rewarded its soldiers with generous land grants of the most fertile soil. For the first time land became private property. Some members of El Salvador’s oligarchy trace their roots to these first acts of expropriation.

Land alone had little value without labor. The colonial government introduced a system of force labor, or *encomiendas*. An *encomienda* put a certain number of indigenous people under the “protection” of a Spanish landowner, and obliged them to work the land of the *hacendados* or landowner (Cardoso and Helwege, 1992, p. 27).

The Spanish established the agricultural export system that would dominate the Latin American economy for centuries. They began a process of gradually expropriating all the indigenous land. In the mid 17th century fewer than 500 Spaniards controlled most of the land of present day El Salvador. Cacao, grown by Pipiles inland, and balsam, harvested closer to the coast, were the dominant crops exported to Spain by traders. However, compared to the mineral rich countries to the south, El Salvador was never a major source of wealth for the Spanish Empire (Murray, 1997, p. 8).

Later, as the export economy developed, El Salvador’s landowners dedicated themselves to cattle-raising and the production of *añil*, the plant producing the increasingly popular dye, indigo. This quickly became the region’s leading export and one more factor that contributed to the extermination of the Pipiles. The dye was extracted by Pipil laborers pressing the leaves with their bare feet. The plant was so toxic that before 1600, the Spanish authorities, concerned by the high numbers of deaths, outlawed the practice of forced labor in the extraction of indigo. The *hacendados*, who by this time
enjoyed the practical independence from Spain that the Atlantic Ocean provided, ignored the law (Murray, 1997, p. 8).

Even more than military massacres and indigo production, epidemics caused by the introduction of new diseases brought by the Spanish colonizers, devastated the indigenous population. Anthropologists estimate that between the years 1524 and 1551, the indigenous population of the land fell from 120,000 to 50,000 (Murray, 1997, p. 8).

By the early 1800s the colonial system in Spain began to decline. The criollos, the Latin American born descendants of the Spanish conquerors, had come to see control by Spain as an unnecessary burden. An independence movement throughout Central America culminated in a regional declaration of independence from Spain in September 1821 (Cardoso and Helwege, 1992, p. 38-39).

Under criollo rule the oppression of the remnant indigenous population and the poor intensified. In the new Republic of El Salvador only landowners of Spanish descent were entitled to participate in the political process. In the following three decades the criollos tightened their control over the political process and the landholdings. During this time there were a few indigenous uprisings, namely the Nonualcos in the central part of the country. The criollos quickly and brutally extinguished these attempts, and manifested their intolerance for such insubordination by mounting the heads of the rebellious leaders in the central plazas of the main cities (Murray, 1997, p. 8).

Around the middle of the 18th century, the profitability of the coffee bean was discovered. Demand for coffee was increasing and it soon became clear that high quality coffee grew very well on El Salvador’s steep volcanic slopes. By 1864 the value of coffee
production surpassed the declining production value of indigo. The development of synthetic dyes in Europe accelerated the expansion of coffee production.

Despite over three centuries of expropriation through the hacienda system, large amounts of land still were dedicated to subsistence farming, or minifundos, and under the communal control of indigenous communities and poor campesinos of mixed descent. To the large landholders committed to expanding coffee production, this large amount of “unproductive” land was unacceptable. In 1881 and 1882, the Salvadoran Legislative Assembly passed a series of laws abolishing the communal land tenure system. It established mechanisms for titling these lands to any criollo who sought to “improve” the land by dedicating it to coffee or any other export crop.

However, regardless of the legal decrees and the expanding market for coffee, Salvadoran campesinos continued to seek small plots in which to plant their milpa (corn, beans and squash) (Murray, 1997, p. 9).

Lows of Cultural Identity

Many Europeans emigrated to El Salvador to take advantage of the new land laws. Most of the families of the Salvadoran coffee oligarchy trace their ascendency to this period. The new coffee barons recognized the need for a reliable stable work force. Simply dispossessing indigenous communal lands would not be enough to guarantee profits from the emerging coffee market.

Along with sweeping land decrees came other laws governing labor in the coffee plantations. Organizing among rural workers was prohibited. An enforcement system
consisting of the first police force (later known as the National Guard) and rural justices of the peace was created.

In 1931, the collapse of the world coffee market plunged the Salvadoran economy into crisis. The coffee oligarchy responded by drastically slashing the wages of labor. Aided by the organizers of the newly formed Communist party of El Salvador - including Farabundo Martí - coffee workers in the western part of the country organized protests against the wage cuts. The army used the unrest as a pretext to stage a coup d'État against civilian government. Ill-planned and undermined by spies among the communists, the insurrection among the coffee workers was crushed by government troops. Around 30,000 people were massacred in the next few days, the vast majority of them indigenous peasants. Salvadorans refer to the actions of those last days of January 1932 as La Matanza (Barry, 1989, p. 13).

The military authorities targeted campesinos wearing the traditional dress of the country’s indigenous groups. Fearful of repression, people stopped wearing such clothing and suppressed other aspects of their culture. La Matanza was thus an important trigger to the westernization of Salvadoran society. Army General Maximiliano Hernández Martínez moved quickly to consolidate his power and put in place economic reforms which, along with the previously imposed wage cuts, assured the survival of the coffee oligarchy. Fifty years would pass before the next civilian president would take power in El Salvador.
Preconditions to Civil War

In the 1950’s, El Salvador’s military leaders placed great emphasis on modernizing the country’s agroexport economy. Huge investments in infrastructure resulted in a new port facility in Acajutla, and several large dam and road projects. Manufacturing expanded rapidly through dual strategies on import substitution and regional economic integration via the newly formed Central American Common Market (CACM) (Cardoso and Helwege, 1997, p.105).

All these changes did nothing to reduce the income disparity between the powerful oligarchy and the rural poor majority. Extremely low wages and increasing rates of profit combined to fuel the existing system of polarization. Emphasis was placed on integrating El Salvador’s economy into the regional market. Little or no effort was put into developing a domestic market for manufactured goods (Murray, 1997, p.11).

The post-war era also ushered in the expansion of cotton and sugar cane production along the coastal plain and in the rich valleys between the volcanoes. This concentrated land into even fewer hands. The agroexport expansion along with a rising population combined to reduce the average amount of land available to subsistence farmers from 7.4 hectares in 1892 to 0.4 hectares in 1971. Durham suggests that 85% of the decline was due to the concentration of land ownership and 15% was due to population increase (1979, p.48).

As many as 300,000 Salvadoran were forced to seek land by crossing the border to Honduras, where land was relatively plentiful. The 1969 “soccer war” between El
Salvador and Honduras forced the return of all those families. By the late 1970s, 40 per cent of rural Salvadorans were landless (Durham, 1979).

Ironically, during this same period macroeconomic indices showed a country enjoying a high rate of economic growth. These statistics revealed little about the miserable conditions that challenged the majority of rural Salvadorans. Clearly, the deteriorating living conditions resulted in building up more and more pressure in an already intolerable situation.

Factors Leading to Civil War and More Repression

Many factors turned the emerging grassroots organizations of the 1960s into the revolutionary front that threatened to bring down General Carlos Romero’s military government of the 1970s. In 1972 and again in 1977, the military discounted national elections, which were clearly won by a broad spectrum of opposition movement represented by the Christian Democratic Party. Dramatic changes were taking place within the Roman Catholic Church. Historically, the church was an extremely conservative institution at the service of the oligarchy. As a result of Second Vatican Council, liberation theology’s tenant of putting poor people first began to take root in El Salvador. It would be impossible to comprehend the minds which led to the growth of mass opposition without referring to the pivotal role of the popular church.

Christian base communities, based on an emancipatory interpretation of the bible, sprang up in almost every parish. The base communities served as place for critical reflection and an organized demand for better living conditions. In their study circles, campesinos challenged the traditional Catholic notion of “suffering in anticipation of
salvation”. Once the rural poor internalized the concept that they were entitled to a life of dignity, they challenged the Salvadoran military with vehement acts of defiance. The military’s attempt to brutally repress the insurrection, only strengthened the campesinos’ resolve. Popular organizations and guerilla groups grew quickly both in the rural villages and the capital despite the increased killing and disappearances (Barry, 1989, p.2).

A union activist from San Salvador, Cayetano Carpio, emerged as one of the leaders of the revolutionary movement. He founded the group Forces of Popular Liberation (FPL). Taking advantage of the growing wave of dissatisfaction in El Salvador’s rural sector, several other groups emerged in the early 1970s besides the FPL, including, the Guerilla Army of the Poor (ERP), the National Resistance (RN), and the Central American Revolutionary Party (PRTC) (Murray, 1997, p. 13). They gained support and membership as repression and electoral fraud radicalized the grassroots movement. The revolutionary army comprised of these member organizations, grew increasingly bold and sophisticated in carrying out armed actions throughout the country.

In October of 1979, a group of army officers staged a successful coup and promised Salvadoran citizens a transition to democracy. The victorious coup leaders implanted a five person mixed civilian and military junta to lead the country until the next elections. The junta took immediate steps toward democratization and structural reform of the economy. The extreme right responded with more covert murders and disappearances. The spiral of violence presented the junta with a painful dilemma over how long to continue legitimizing the repression by their presence. By the time Archbishop Romero was assassinated in March 1980, the junta had all but dissolved. The
vacuum was filled by a group of opportunistic politicians committed to pressing forward the democratization platform regardless of the degree of violence this path incurred.

Napoleon Duarte, who was robbed of the presidency in 1972, joined the second ruling junta and became the figure upon which the U.S. constructed its Salvador policy for most of the decade. Mutilated corpses appeared at the side of the road, as the death squads operated with complete impunity. Murray estimates the total political murders to be about 15,000 from 1980 to 1981 (1997, p. 13). Most surviving activists either left the country or joined what was to become the FMLN in the remote Salvadoran mountains.

In late 1980 this group of renegade activists formally called for an insurrection to topple the government. They formed the Farabundo Martí Front for national Liberation (FMLN), and launched the final offensive in January 1981. This marked the beginning of a full-scale civil war, that would dominate national affairs until 1992.

The impact of the civil war on Salvadoran society was immense. Approximately half of the estimated 80,000 people that died were civilians murdered by the army or some paramilitary group because of their presumed connections to the guerilla movement. At least 70,000 others were incapacitated by war related injuries (Murray, 1997, p. 14).

The fighting displaced about one million people. Refugees fled to all parts of the world, many ending up in the United States, most without immigration documentation.

The war exacerbated the polarization of Salvadoran society. Every village, neighborhood, institution and in many cases families were pulled apart on one side or the other. The suffering imposed by the war spared almost no family. Almost every Salvadoran can claim family members that were either murdered or forced to live in
another country. This factor merely exacerbates the disruption already caused by the civil war as much of Salvadoran society is based on kinship ties within and between extended families.

The FMLN’s strategy consisted of repeated small scale guerilla offensives against military strongholds and acts of sabotage. The FMLN depended on widespread popular support throughout rural El Salvador, as opposed to specific remote rural bases. One of the FMLN’s most often quoted slogans was “the people are our mountains” (Murray, 1997, p. 14).

Given these circumstances the government’s military strategy consisted of clearing the local population from areas of guerilla activity. These operations resulted in large scale deforestation through “scorched earth” campaigns and were followed by massacres of thousands of civilians (Murray, 1997, p. 15).

Despite the massive injection of military aid to the Salvadoran government from the United States ($6 billion over the 12 years of war), by 1990 the war remained at a stalemate. Several factors finally led to a negotiated peace agreement and a Peace Accord signed in Chapultepec, Mexico on January 16, 1992. Not least of these was the murder of six Jesuit priests, their housekeeper and her daughter by the Salvadoran military. This act directly challenged the US government’s claim that the Salvadoran army was the only force of democratization. International pressure combined with an extremely war weary civilian population finally led both sides to seek a United Nations mediated peace settlement (Murray, 1997, p. 15).
Attempts at Land Reform

Many analysts agree that landlessness and rural poverty during the 1960s and 1970s created the conditions that led to the civil war. Even the suggestion of land reform by General Arturo Molina in 1976, generated sharp opposition from the military and large landowners (Murray, 1997, p. 24). With the help of USAID, in the late 1970s the government began a new program to distribute land to poor campesinos. A complicated and contradictory set of laws provided for the redistribution of all land claims exceeding 500 hectares. With the support of the army the program redistributed almost 20 percent of the country’s agricultural land, the majority of it to new cooperatives made up primarily of families that had been workers on the land. Over 85,000 poor rural families received land.

Using the intensification of war as a pretense, the cooperatives were not given the necessary start-up training and resources to make them viable. The cooperatives struggled throughout the war to resolve problems of organization and credit.

The war itself brought about further land transfers, as small farmers occupied abandoned estates. The Peace Accord did set up a Land Transfer Program, which allowed homesteaders and excombatants from both sides to purchase land. After the war the government committed itself to complete the land reform plan and redistribute the land of all estates over 245 hectares (World Bank, 1998, p. 6). With international funding, the government’s Land Bank was responsible for legal title transfers. The plan was for the Land Bank to redistribute an average of 3.2 manzanas (2.24 hectares) of land to about 40,000 families (World Bank, 1998, p. 6).
Distributing that much land through the Land Transfer Program in itself was a monumental task, but creating the conditions for farmers to generate a livelihood proved almost impossible (World Bank, 1998). Even farmers lucky enough to receive land often ended up with a huge debt burden. In mid-1996, the government offered to forgive 70 percent of the land debt of agrarian reform and Land Bank beneficiaries, provided they could pay the remaining debt within a year. Well off individual farmers took advantage of the offer, but few of the cooperatives could hope to come up with the 30 percent of debt that had been accumulating interest since the early 1980s. Many of the cooperatives claimed the offer was a sophisticated attempt on the part of the government to return the land and the power back to El Salvador’s upperclass.

The debts of those unable to pay off the 30 percent would be taken over by a private bank, empowered to foreclose if the cooperative continued its failure to pay back the loan. This led one left wing analyst to refer to the new measure as “The Law of Guaranteed Foreclosure”.

The most recent statistics suggest that at least 370,000 households in rural El Salvador still have little or no land (World Bank, 1998, p. 42-43). Hence, in terms of overall land distribution, the current situation is very similar to conditions immediately before the war.

Overview of the Economic Conditions

El Salvador’s agroexport economy collapsed when the war broke out. The combination of attacks on plantations, market changes and an investment boycott by an oligarchy opposed to any reforms on the part of the Christian Democrats, caused export
income to plunge. The contribution of agroexports to the economy shrunk from a high of 25% in 1978 to 4% in 1992 (Murray, 1997, p. 27).

By the mid-1980s a new source of foreign exchange had surpassed agricultural exports and even foreign aid. The war and other hardships had forced at least one million Salvadorans to flee their country. About half went to the United States, the rest to Canada, Australia, several European countries, Mexico and neighboring countries in Central America. The displaced Salvadorans found work and sent money back to their families in El Salvador. In 1984 remittances or remesas reached about 120 million dollars; in 1995 they surpassed a billion dollars, nearly twice the income from agricultural exports (Murray, 1997, p. 28).

When it took office in 1989, the Cristiani administration immediately embarked upon a structural adjustment program it had been planning for years. The plan included cuts in government subsidies, privatization of public entities including the banks, tariff reduction and tax reforms all designed to reduce state participation in the economy and to increase the role of the market. The program sought to reorient the market toward nontraditional exports such as shrimp, melons and textiles (World Bank, 1998, p. 29).

The government’s commitment to structural adjustment found favor with the international funding institutions. In 1991-93 the World Bank and the Inter-American Development Bank (IADB) approved more than $800 million in loans to El Salvador. Each loan came with strings attached, deepening the country’s commitment to structural adjustment whatever the social cost (Murray, 1997, p. 28).
Poor Salvadorans suffered the most under the economic reforms. Almost immediately the price of staple goods such as rice, beans, cooking oil and powdered milk escalated and squeezed household budgets to their limits. Decreased tariffs threatened the tiny profit margins of a range of small and medium-sized businesses, and tax reforms tended to redistribute income toward those who were already wealthy. Even according to the government’s own statistics, levels of extreme and relative poverty increased during the period 1989-91 (Murray, 1997, p. 29).

As a result of the civil war peace agreement the government was also required to fund post-war reconstruction through the National Reconstruction Plan (PRN). The problem is that government funding to implement the plan threatened to weaken the structural adjustment program. The PRN called for creating new public agencies, and supporting potential economic agents such as relocating farmers from areas damaged by the conflict. The government resolved this conflict by acquiring external funding for the majority of the PRN program. Also, the governing ARENA party liberally interpreted the social programs mandated by the PRN program. Whenever possible the market would decide who succeeded or who failed. There would be no subsidies or price supports for vegetables produced by ex-combatants or special marketing arrangements for coffee cooperatives (Murray, 1997, p. 21).

The UN soon noticed the contradiction between its vision of the construction of peace and the World Bank’s advocacy of strict structural adjustment. After a large amount of political maneuvering the government did show some flexibility. It invested in some reconstruction programs such as making credit accessible for ex-combatant small
farmers. In general, however, when the needs of the Peace Plan conflicted with the economic reform program, structural adjustment usually won out (Boyce, 1996).

**Understanding Local Government**

The Spanish colonial government established municipalities in its colonies as a way of extending its administrative control. In El Salvador, 262 municipalities were created. Only the largest municipalities have significant resources. Local politics almost always paralleled the national agenda, to the extent that the mayors usually maintained close relationships with the wealthy families. The Salvadoran electoral system at the municipal level is one of winner take all in which the mayor’s party holds all the posts in the municipal council (Murray, 1997, p. 33).

During the war the national government decided to use the mayors as the focal point of their counterinsurgency campaign (Murray, 1997, p. 34). The government poured millions of dollars of foreign aid into public works projects carried out through the mayors. In response, the FMLN led guerilla movement targeted the mayors thought to be using project funds to support government activities.

Despite the intense power struggle at the local level, the government decided to channel the post-war reconstruction efforts through the mayors office at the municipal level. During the 1994 elections, FMLN candidates proposed a “new municipalism” that would break with the exclusionary past and create more participatory local politics. Due to under funding and their lack of experience on the political scene, the FMLN won only 15 municipalities in this election (Murray, 1997, p. 34).
Despite the electoral set back, the municipalities continued to be sites of contention in which FMLN activists targeted their efforts to push forward more democratic structures at the local level. Now that most of the reconstruction funding has been exhausted, the question of where funding will come from for municipal development is primary on the mayors’ minds. Over one-third of El Salvador’s 262 municipalities have populations of less than two thousand people. Due to the prevailing poverty level, raising money through taxes is not an option for the majority of the mostly rural municipalities. The mayors have little hope that the central government will devote more of its already overburdened budget to municipal support (World Bank, 1998, p. ix).

The second election of the post-war period occurred in March 1997, when the country went to the polls to elect 84 members of the National Assembly and all 262 mayors. This time the FMLN did much better than it did in 1994. The FMLN gained control of 53 municipalities including Ahuachapán and Tacuba, the field site for this research project (Murray, 1997, p. 35). Since the last election the FMLN has gained experience and evolved into a political party rather than a revolutionary front. The FMLN focused its campaign on the shortcomings of ARENA’s economic policy and the rampant corruption in the ruling party. Even though the FMLN did not make its gains based on a program of substantive social change, for many Salvadorans the elections served as a hopeful sign that changes are to come. This feeling was evident especially during the street celebrations in Tacuba soon after the elections.
The Politics of Gender in Post-War El Salvador

Women in El Salvador bear a disproportionate share of the burden of poverty. The country’s inadequate health system, is unable to respond to the needs of the rural poor. Only 609 maternal hospitable beds are available for the 150,000 births that take place each year. In 1992, 70 per cent of all mothers had no prenatal care of any sort and El Salvador had one of the highest rates of infant and maternal mortality in Latin America, 42 deaths per 1000 live births (Murray, 1997, p. 63).

For a variety of cultural and economic reasons, women have less access to formal employment than men. The culture of *machismo* continues to project a powerful ideal of the Salvadoran woman, living only within the sphere of the home under the protection of her husband. *Machismo* is the rational behind job discrimination, domestic violence and women’s limited participation in social organizations. The experience of the civil war undermined these cultural patterns in many ways, but affirmed them in others (Murray, 1997).

Official poverty statistics, which measure household income against the cost of basic consumer goods, show that in 1993, just under 60 percent of Salvadoran families did not have sufficient income to buy basic necessities. But the statistics do not reveal the unequal power relations between women and men; in many families available resources are not shared equally among family members. Nor do the statistics distinguish male from female headed households, and thus underestimate poverty among women and children (Murray, 1997, p. 34).
Foundations for Popular Educators

During the war, public services disappeared completely from the areas of the country that were not under government control. With the government's structural adjustment program the already meager expenditures for social programs such as health and education were even further reduced.

NGOs that began to offer basic services acquired the hostility of the government and the military, since the people they were serving were considered subversives. Lack of resources and trained personnel forced NGOs to train local people as health and education workers. As the war progressed, NGOs came to play an important role in supplementing services in poor communities all over the country.

Toward the end of the war only 20 percent of the rural population had direct access to health services; the infant mortality rate was as high as 46 per thousand (Murray, 1997, p. 49). Most of the deaths of children under five were due to diarrhea, respiratory infections and other treatable diseases. At least 15 per cent of school aged children never attended school. The literacy rate in rural areas was about 40 percent (Barry, 1991, p.102).

Because of the structural adjustment program, conditions did not improve very much after the war. Increased spending on public security, debt service and the military account for the slow relative growth of social spending, not to mention the high social cost of bureaucracy, centralization and corruption.

While it is a myth to say that all poor people in El Salvador belong to popular organizations, poor people did inherit a high level of organization from the war years.
They have gained control of significant amounts of resources, especially land. In recent years, the organized poor have enjoyed unprecedented external resources. During the war, the Salvadoran NGO sector grew from a handful of charity clubs into a varied collection of hundreds of organizations providing a wide range of services. As in so many other areas of social life during the war years, El Salvador’s churches played a critical role in this development. In the early 1980s, with almost all avenues of social action closed off by repression, church workers took tremendous risks in establishing NGOs, and many dedicated individuals lost their lives in the process.

Almost all NGOs had close links to either the FMLN’s revolutionary project or the counterinsurgency strategy advanced by the government. The civil war influenced everything they did, including the day-to-day choices of where and how to work. The complex political situation created formidable barriers to NGO coordination; several organizations in the same area provided identical services to people differentiated only by their particular party connections within the FMLN (Murray, 1997, p. 58).

While peace made it possible to work more openly on long-term development, NGOs needed new personnel and administrative procedures as well as fresh strategic orientations. Rapid institutional change engulfed all local NGOS in the mid-1990s, as political alliances were re-examined, and vertical wartime structures were changed to give constituents more control over the organizations designed to serve them.

**Environmental Conditions**

High population density, agricultural modernization, industrialization, pervasive poverty and 12 years of civil conflict have placed substantial pressure on El Salvador's
natural resource base and environment. The result of this pressure has been extensive deforestation, loss of biodiversity and reduced capacity of coastal fisheries (World Bank, 1998, p. 49).

Deforestation is particularly severe. Studies indicate that 98 percent of El Salvador's original forest has been cut. Currently only 327,000 hectares, or about 12% of the total area of El Salvador, remains under forest cover (including shade tree coffee plantations and salt forests). The increasing scarcity of fuelwood has caused a dramatic increase in the market price and in the average time spent by rural families to collect it (PROMESA, 1993, p. 34).

The deforestation, in turn, has contributed to widespread soil erosion in El Salvador. It is estimated that more than 50 percent of all land suffers from severe soil erosion. Roughly half of the Salvadoran population depends on crops planted on steep slopes, which are vulnerable to erosion, for subsistence. Also, the absence of trees has lowered the soils' capacity to absorb water, thereby limiting the recharging of underground water sources. Springs that used to give water all year round now disappear mid-way through the dry season (World Bank, 1998, p. 49-50).

Farmers throughout El Salvador are well aware that certain agricultural practices are undermining their own livelihoods, but confronted with the daily struggle for survival, they see no alternative.

Despite the environmental problems, El Salvador's level of biodiversity (as measured by the number of species present in protected areas and mangroves) is roughly equal to that of the United States. Unfortunately, this valuable resource is threatened by
incursions into, and reduction of important protected habitats. Currently, protected area, which theoretically shelters most of the biodiversity, is equal to less than 0.6 percent of total area, compared with 9 percent in the United States (PROMESA, 1993, p. 3).

San Francisco Menéndez and Tacuba:
Description of the Research Site

Life in San Francisco Menéndez

San Francisco Menéndez (S.F. Menéndez) is a small town located in El Salvador’s western most department called Ahuachapán. At the turn of the century the town belonged to a Guatemalan landowner. In 1918 the Salvadoran General Menéndez negotiated and extended El Salvador’s western most boundary to the Rio Paz. His action firmly established S.F. Menéndez’s designation as a Salvadoran town (SalvaNatura, 1996). S.F. Menéndez began as a tiny village consisting of five families and gradually grew to be the seat of the municipality. The municipality of S.F. Menéndez consists of nine counties, 50 villages and hosts a population of about 50 thousand inhabitants. The town of S.F. Menéndez itself has a population of about 7,000 residents distributed among 1500 households. About 30 percent of the small farmers have title to their parcela, or parcel of land in which they grow corn and beans, an individual parcela averages a manzana, or 1.4 hectares in area (World Bank, 1998, p. vii). Despite several efforts at land reform the majority of households in S.F. Menéndez rent land from larger land owners or belong to agricultural cooperatives.
Although most of the fighting during the last civil war took place in the central and eastern part of El Salvador, inevitably it had an impact on Ahuachapán. One of the more direct impacts that resulted from the war include, the migration of thousands families to the west to escape the ravages of war in the east. The Peace Accord resulted in a new variation on the land reform program by subdividing all properties larger than 245 hectares into parcels averaging two hectares (World Bank, 1998, p. 199). The land went to excombatants, squatters and tenant farmers. All this contributed to the deforestation of the area as more and more households converted their allotment to agricultural land.

The primary economic activity of the region is agriculture. About 80 percent of the residents in S.F. Menéndez dedicate themselves to subsistence agriculture, growing primarily corn and beans. About 15 percent of the population are engaged in some form of small business. The remaining five percent are either government employees or engaged in the service sector. The majority of the population at least partially participates in the informal sector and bartering, which are not recognized by municipal or national statistics. The majority of residents are small farmers who grow corn and beans for subsistence and a limited local market. Several large coffee plantations dominate the higher elevations surrounding El Imposible National Park. About half are owned by individual landowners and the other half are cooperatives consisting of local farmers. There is a limited amount of diverse vegetable and fruit production, such as pineapple, primarily for local markets and a limited amount of export. Very near the coast export crops such as sugar cane, watermelon and coconut dominate. Cattle, pigs, poultry and bee keeping are other income
generating activities that are present but limited in the area. On the coast and along the principle rivers residents commonly engage in subsistence fishing.

There is a limited amount of secondary, value added activities, including: coffee roasting, sugar refinement, dairy products, and adobe shingles. Although employment opportunities are very scarce, the subsistence economy by necessity can be characterized as diverse.

Existing Rural Development Projects

The entire municipality of S.F. Menéndez was the focus of a five year national environmental project called the Green Project. The Green Project received substantial funding from the U.S. Agency for International Development (USAID). The entire Cara Sucia watershed, which encompasses the southern side of El Imposible National Park and the municipality of S.F. Menéndez was selected to be the project’s demonstration area. Within the demonstration area the Green project operated from an office in the town of Cara Sucia (see map; figure 3). The Green Project administered several rural development projects that affected almost every farmer in the region. Projects included a farmer field school in which community leaders were selected to participate in field-based, agricultural methods training. The farmer trainers then committed themselves to working with farmers in their own communities. Other Green Project activities included community latrine projects and community Lorena stove projects. 1997 marked the third year of the five year project. By that time, practically every resident was familiar with the Green Project and most had interacted with it in some way.
Figure 3. Map of El Imposible National Park
Most towns and villages accessed national health and education programs through community associations and committees. The primary schools were part of a national, rural, community education program or EDUCO (Educación con Partipación de la Comunidad). Therefore, most communities had an EDUCO committee which not only served to administer the local school, but also as an organizing body to address other community issues. Similarly, several communities have development associations or ADESCOs (Asociación de Dessarrollo Comunitaria) in which, theoretically, individuals are elected to serve for specified periods of time.

**Results from the Participatory Rural Appraisal (PRA)**

Much of the information listed here about livelihood strategies and development priorities is the result of a series of Participatory Rural Appraisal (PRA) workshops administered by the PROMESA project in 1996.

It is interesting to note, that the PRA results indicate that the residents of S.F. Menéndez identified the greatest barrier to their development to be the lack of a paved road. During the PRA, working groups reduced the totality of their barriers to development to the fact that businesses would not risk investing in S.F. Menéndez without a paved road. From the residents’ perspective there is a linear series of causal relationships stemming from the inadequate road. Without a road there can be no investment, without investment there can be no employment, without employment there can be no development and without development, there is no hope. The lack of jobs also contributes to the degradation of natural resources in El Imposible National Park, in that...
lacking alternative sources of income, resident youth are forced to hunt and collect
firewood and endangered plants, such as orchids within the national park.

Through the PRA process residents also identified their isolation as a major factor
impeding their development. Due to the mountainous surroundings, radio and television
reception is extremely limited. In a translation from one of the PRA sessions, a local
resident quipped, “we know more about what is happening in Guatemala than what is
happening in our El Salvador.”

Another major problem area identified in the PRA process is education. Although
elementary school through ninth grade is available to most children, high school is at least
an hour long bus ride away. The investment of time walking to town to catch the bus,
combined with the travel time and bus fare make this an unavailable option for most of the
town’s adolescents. Without a high school education access to very limited business and
service sector jobs is practically impossible. Hence, from the residents’ perspective, this
was just another factor which contributed to an environment of poverty and hopelessness.

From household surveys generated by the participants of the PRA, it is estimated
that the town’s no literacy skills rate for adults above 15 years old is about 30%. The
surrounding villages have a no literacy skills rate of about 80%. This led many PRA
participants to suggest that the town does not have the capacity for nonagricultural jobs,
because there are no vocational or training schools in the area.

The PRA indicated a number of health and sanitation problems in S.F. Menéndez.
Among children under five the greatest threat is from dehydration through diarrhea usually
linked to waterborne parasites. At the time of the PRA in June of 1996, in the rural area
surrounding S.F. Menéndez only 40 percent of the families used latrines. In town itself ten percent of the households did not have running water. These families used water directly from the river, Rio San Francisco. Almost all households, both in town and in the rural surroundings washed clothes directly in the river.

In S. F. Menéndez there is a community health center, which provides basic health services for the town and the surrounding rural villages. The public health department employs and trains several local community outreach health promoters that operate dispensaries stocked with a limited amount of medicine provided by the government. The health promoters travel from village to village in the most rural sections, dispensing vaccines whenever possible and antibiotics when necessary. Also, there is a well developed informal system of mid-wives made up of local women. The nearest complete health facility for complicated births and more serious medical problems is several hours away in the city of Sonsonate.

The staple diet, both in town and in the surrounding rural area, is corn tortillas and beans. There is very little pasture in the region so access to fresh beef is limited. Poultry, fish and eggs supplement meals whenever possible, depending on availability and household wealth.

During the PRA process basic needs were identified and prioritized by the residents of S.F. Menéndez and the surrounding communities. The participants at the PRA meeting identified construction of basic infrastructure as the priority of the region. This included paving the main road to S.F. Menéndez and constructing and improving the network of roads to the surrounding villages. Road building was identified as essential to
guarantee access to markets, schools, health centers, jobs and social events for the well being of the village.

Similarly, the construction of new schools was also identified as a priority need, to the extent that no child would have to walk more than three kilometers to get to school each day. Strengthening the school system would enable the region to have more school teachers in the area and also provide a meeting place for evening adult literacy classes.

Along with the construction of new schools, the participants of the PRA session identified vocational training as a priority. This would give young people the skills they need to find employment outside of subsistence farming and picking coffee beans.

The following is a list of direct requests made to SalvaNatura by the participants during the PRA process, with the expectation being that SalvaNatura could either fund these activities or provide assistance involving other government agencies.

1. Communication equipment: More radio antennas and repeaters on the mountain peaks to overcome the lack of information due to S.F. Menéndez’s geographical isolation.
2. Establishment of a High School in S.F. Menéndez: A high school is essential to the development of the area. It would provide accessible education to local youth who have almost no other options.
3. Ecotourism development: Developing small, locally owned restaurants and lodges to accommodate the visitors who will come to see the national park.
4. Construction of a Community Health Center: Convert the small temporally staffed health outpost to a full fledged community health center. This would reduce the need for transporting the ill to the hospital many hours away.
5. Nutritional Improvement: A need to improve the general health and nutrition of the area. Especially, that of pregnant and nursing mothers.

6. Bring electricity to the surrounding rural villages.

7. Make vocational training available in the region; especially for carpenters, tailors and auto-mechanics.

8. Adult Literacy Classes: In the surrounding villages where the majority of adults have no literacy skills.

**Life in Tacuba**

Tacuba borders the national park on the northern side. It lies about 14 kilometers north from S.F. Menéndez on an old service road (closed to vehicles) that transects the park. It lies about 16 kilometers southwest of the regional capital, Ahuachapán. It is a picturesque town nestled in the Apaneca Lamatepec mountains at an elevation of about 700 meters. It is surrounded by coffee plantations, small farms and forests. Access to Tacuba is limited due to a poorly maintained dirt road that is often washed out during the rainy season. The town’s population is about 45,000 people and is divided into four barrios or districts. These districts are organized into 14 *cantones* or subdistricts which are further subdivided into 32 *caserios* or villages. Municipal statistics identify 7,500 households as living in conditions of extreme poverty (SalvaNatura, 1996).

Archaeologists site Tacuba as being an active prehispanic settlement. Unlike S.F. Menéndez and most towns in El Salvador, Tacuba still maintains a strong indigenous identity. Many of the traditions that evolved during the Spanish conquest which combined Mayan spirituality with Catholicism are still practiced. Every year in the middle of July,
Tacubans celebrate *Las Fiestas Patronales*, or the Patron Saint Celebration in honor of María Magdalena, the patron of Tacuba. The celebration consists of traditional dances, theater and parades. Many visitors travel from Ahuachapán and other parts of El Salvador to participate in the festivities. There are a number of similar traditional celebrations throughout the year, which set Tacuba apart from most of the rest of El Salvador. Some of the older residents of Tacuba still wear hand woven indigenous clothes, a tradition largely abandoned by most rural villagers in El Salvador after the “soccer war” massacre over 60 years ago (SalvaNatura, 1996).

**Priority Needs Identified by Residents.**

In 1996 and 1997, the protected area management plan team of SalvaNatura completed several community needs assessment sessions in Tacuba and the surrounding villages. Invariably, the residents participating in these sessions identified several priority needs. Similar to S.F. Menéndez, the residents of Tacuba identified their isolation as the main barrier to the town’s development. A hilly, unpaved, 18km road separates Tacuba from the regional center of Ahuachapán. Similarly, Tacubans linked poverty in the outlying villages to the poor condition of the road. The roads connecting the *cantones*, El Jicaro, El Sincuyo, El Nispero, El Naranjito and El Rosario with the town of Tacuba provide at best seasonable access for heavy duty four wheel drive jeeps and trucks. This issue is further complicated by the inhabitants’ claim that the large coffee plantation owners restrict access to the roads that cross their land. For example, the residents of El Jicaro must request a key from the landowner or the caretaker anytime they desire to travel to town by way of the main road. As in S.F. Menéndez, the residents identified a
series of causal relationships limiting Tacuba’s development stemming from the absence of good roads. The following example was included in the notes documenting the meeting:

Lack of transportation increases the cost of production to the small farmer. The farmer is then limited to selling what he can carry on his back or, in some cases, to what he can secure on the back of a pack animal. Vehicular transportation for a 200 pound sack of corn would cost the farmer about 150 colones, or more than the market price for the corn itself (SalvaNatura, 1996).

The quality of life of small farmers continues to spiral downward due to the poor market price of basic grains in Tacuba. Small farmers complain that the buyers in Tacuba often conspire to set an artificially low price for agricultural products. The farmers feel squeezed by declining market prices and rising interest rates on bank loans they are obliged to pay back. One community leader commented that farmers are farming for the sake of tradition, as any benefit that might be derived from their labor is exploited by the middlemen and the banks (SalvaNatura, 1996).

With little or no opportunities for alternative income generating activities, rural households are obligated to migrate to other parts of El Salvador or other countries to survive. During the three month coffee harvest families often leave their homes to labor in the coffee plantations for minimal wages based on the amount of their daily harvest.

Another acute problem identified by the participants of the PRA was the lack of available community medical services. For the most basic medical assistance, residents of rural villages are required to walk several kilometers to the town of Tacuba. Even then, most patients are referred to the hospital in Ahuachapán.
In their work groups, several of the local residents participating in the SalvaNatura management plan meetings indicated the lack of adequate roads as the core impediment to their village’s development. In their analysis they described a direct cause and effect, ultimately rooted in the lack of adequate transportation. For example, the high rate of infant mortality is due to limited available medical attention, which is due to the difficulty in getting to the clinic, which is due to the inadequate transportation system. The sense of hopelessness pervading Tacuba’s youth is due to their limited education. The youth cannot attend school beyond the sixth grade because of the extended travel time required to reach the secondary school, which is directly attributed to the poor quality of the roads. The lack of education forces youth to choose between staying in the village and continuing with subsistence farming or look for manual labor jobs in the city of San Salvador.
CHAPTER IV
RESEARCH DESIGN AND METHODS

Introduction

This research project is a case study of a nonformal education intervention in the communities surrounding El Imposible National Park in Ahuachapán, El Salvador. The research was carried out with the support of and in collaboration with SalvaNatura -- an environmental nongovernmental organization mandated to administer El Imposible in conjunction with the government of El Salvador.

The study consisted of an in-depth, qualitative investigation of the short term outcomes generated by three training programs based on critical pedagogy. Qualitative methods including interviews, focus groups and participant observation were used before, during and after the training programs to assess the programs’ effects on the participants and their communities. These data, along with products and outputs generated by the participants during the training program, were analyzed to develop a framework for assessing the short term impact of participatory training on rural development.

The research design, strategy and methodology presented here were developed to both fulfill the research goals and be appropriate to the field site context. The purpose of this chapter is to explain the development and implementation of the research design and
methodology. This chapter also covers the assumptions, limitations and considerations upon which this study is based.

Preliminary Study of the Research Context

My association with El Salvador goes back to 1992. I had the good fortune to be part of a team responsible for designing and implementing three different training programs for Salvadoran environmental educators in Amherst, Massachusetts. The training programs lasted from five to nine weeks each. The program participants were educators who were selected because of the exceptional work they were doing in the field of environmental education and because of the range of environmental organizations they represented. They were recipients of scholarships provided by the United States Agency for International Development (USAID) as part of an educational initiative known as the Central American Peace Scholarship (CAPS) project.

The training programs were administered by the Institute for Training and Development (ITD), a nonprofit training organization based in Amherst. Some of the training projects allowed me to travel to El Salvador to complete pre-training needs assessments. During these trips, I would visit the participants in their place of work in order to assess their training needs and provide orientation to the U.S. program. Also, in 1994 I participated as a consultant on the USAID funded Salvadoran National Environmental Protection Project (PROMESA), which subsequently changed its project name to the Green Project. I was part of a team responsible for generating the training plan for the project. The work included site visits and interviews with the primary
environmental governmental and nongovernmental organizations active in the western part of the country. As a result of my experience with ITD and PROMESA, I was in a position to comprehend the severity of El Salvador’s environmental degradation and take part in the network of organizations and leaders working to protect the country’s dwindling natural resources.

Through this network, I was able to identify El Imposible National Park as a likely research site and SalvaNatura as an ideal research partner. When I first approached the NGO’s Executive Director, Juan Marco Alvarez, SalvaNatura was in the midst of producing the park’s long term management plan. Early in this process SalvaNatura realized that the only means to achieve sustainable protection for the park was by bolstering support from the surrounding communities. Coincidentally, Juan Marco was seeking new and creative ways to integrate the local communities into the management of the protected area.

I proposed to SalvaNatura my basic research interest of evaluating the impact of participatory training programs in rural communities. It dovetailed well with the Participatory Rural Appraisal (PRA) that was already being implemented as part of the management plan process. SalvaNatura agreed to provide me with housing, food and any logistical support I might need as part of my research.

**Overview of SalvaNatura**

A powerful player defining the relationship between El Imposible and the surrounding communities is SalvaNatura. It is one of the largest and best managed
environmental, nongovernmental organizations in El Salvador. SalvaNatura's mission is to protect and restore the country's dwindling natural areas and promote sustainable development through the conservation of natural resources. Besides managing El Imposible, SalvaNatura administers several other conservation projects at a national level. Compared with other environmental nongovernmental organizations in El Salvador, SalvaNatura enjoys a substantial membership base. The bulk of SalvaNatura's funding comes from international and national projects supplemented by membership fees and private donations.

Since it began managing El Imposible in 1991, SalvaNatura has undergone a gradual transformation from an exclusively environmental NGO focused only on its mandate to protect biological resources, to an NGO emphasizing community development as the best road to lasting natural resource protection. This strategy of reaching out to communities evolved slowly for SalvaNatura and it is still evolving. This transformation came about as the only working alternative to the resentment caused by the preservationist strategy the NGO employed a few years ago.

From SalvaNatura's perspective the intent of the strategy was to build community support for and reduce opposition to El Imposible's conservation programs and policies. As a result, a large part of El Imposible's management plan is dedicated to strengthening the communities surrounding the protected area and generating greater support for its conservation goals. However, along with the benefit of greater community support, community expectations also rose. Potential problems developed when local residents expected more direct benefits than SalvaNatura could possibly deliver. Also, communities
(or powerful individuals within communities) expected a greater voice in managing natural resources within the park. Inevitably, this dynamic helped shape the conditions which influenced the design and implementation of this study.

**Preparation for the Study**

From January through March of 1997 I completed a preliminary assessment of the research site. During this preliminary visit I oriented myself to the protected area and the communities surrounding the protected area. I reviewed all the existing materials about the area that SalvaNatura had on hand. The materials included the park management plan, maps, community assessments, aerial photographs, descriptions of historical land use, ecological studies, land tenure agreements and many other materials available through the SalvaNatura office in San Salvador. I spent the first two months of my time familiarizing myself with the municipality of Tacuba on the north side of El Imposible and San Francisco Menéndez on the south side. I immersed myself in community life to the furthest extent possible. I accompanied and assisted SalvaNatura community promoters with the implementation of their reforestation program. I worked with farmers in the field. I accompanied families on long treks into the hills to gather fuelwood. I taught environmental education in the local school and worked with students to complete a preliminary survey on water use in the town and in the surrounding villages. During this preliminary phase, I recorded a full range of information describing daily life in Tacuba and San Francisco Menéndez. Simply being aware, conversing with locals and noticing
behavioral patterns, revealed important attitudes towards the protected area that would have otherwise remained invisible.

I divided my time between building a rapport with the communities and participating in outreach activities with SalvaNatura staff. Working in this capacity gave me the opportunity to familiarize myself with the protected area, and allowed me to observe the residents’ traditional use of natural resources in and around El Imposible. Also, interacting with SalvaNatura staff provided me some insight to the organization’s perspective on protected area management practices.

Once I felt comfortable around Tacuba and San Francisco Menéndez, I developed a certain geographic familiarity as to “who lived where and why.” As well as some savvy as to formal and informal social associations that operated within each of the municipalities. I also solicited the aid of “key informants” in each area. In the case of Tacuba, my informant was a teenage boy who lived in a village just outside of the town of Tacuba. The youth was well known because he was outgoing and his father was head of the local ADESCO, or development association. In San Francisco Menéndez, my informant was a young man who worked in the small hardware/general store located in the center of town. With my informants’ assistance, I spent many evenings strolling through the neighborhoods introducing myself and informally interacting with community members, who were most likely to be out on their porches and cheerfully accessible this time of day.

It was important for me to be straightforward about my presence and intentions. From the very beginning I tried to clarify my role as a researcher. Initially, I was hesitant
to use the word “research”. The word in Spanish connotes judgment, inspection or interrogation. All these activities were associated with either the military activity that happened during the civil war or meaningless government surveys that occurred with more frequency as the election approached. If I wanted the Salvadoran participants to view the this study as a potential benefit for them as well as for me, I needed to be clear about the purpose and value of my research.

I began by being straightforward about the establishment of the protected area as a major intervention into their community and their livelihood. I indicated that their lives and their predecessors’ lives were so inextricably linked to the land and its resources that it created a unique opportunity to examine the interrelationship between local communities and projected areas. I tried to genuinely express my enthusiasm at being able to share in their lives, and my desire that the experience be mutually beneficial.

Throughout this orientation period, important observations and notable conversations were recorded in daily field notes, then reviewed and re-organized that evening or the following day. The daily experience dictated the methodology. Developing rapport and gaining acceptance to the community proved to be critical factors that defined the richness and accuracy of the data.

Selecting Topics for the Training Programs

This familiarization phase allowed me to organize four different focus groups. The focus groups consisted of about fifteen people each. Residents of Tacuba made up the first group. Another consisted of residents from the villages adjacent to El Imposible within the Tacuba municipality. The third group consisted of residents from San
Francisco Menéndez and the fourth from rural villages within the San Francisco Menéndez municipality.

The object of the focus groups was to create a nonthreatening environment where the participants could speak freely about the park and their use of natural resources as they related to the park. As much as possible I tried to include residents representing different community interests in each of the focus groups. I had already identified several "interest groups" within a community. Groups included small farmers (both men and women) with title to their manzanas (0.7 hectares), subsistence farmers renting land, business owners who run small shops in town, park guards who work for SalvaNatura, youths who commute weekly to San Salvador for jobs in manual labor, youths who primarily work on the family farm, and unemployed youths who travel to town daily to "hangout".

During the focus groups, I facilitated discussion around controversial issues that emerged from my previous conversations with locals. They provided me with an opportunity to learn the range of feelings surrounding a particular issue. Toward the end of the session, I proposed the training programs as a strategy for addressing some of the issues that were raised during the focus groups.

Through the combination of my own participant observation, conversations I had with local residents, and the results of the focus groups, three different training topics were selected: 1) community based watershed monitoring and protection; 2) community based project planning and organization; 3) building a bridge between rural communities and SalvaNatura or forming a "Liaison Committee".
1997 was a drought year in El Salvador. Access to a reliable water source, particularly during the dry season, as well as access to a clean water source proved to be a primary concern shared by everyone in the region. During the San Francisco Menéndez rural village focus group, the idea of tapping into a known water source within the park boundary came up. Intuitively, everyone at the meeting understood the ecological relationship of the forested area to a dependable, clean source of water. The discussion led to questions, such as, "How much water is available from this source in the park?", "How much water do we need and for what?"

This led me to propose a training on a participatory approach to investigating and organizing information on water issues. I spent the next month of my time assessing the general support for the training topic, completing a rough needs assessment and identifying individuals who would be interested in participating in such a training. In my training experience with ITD, I had co-facilitated several workshops on participatory watershed monitoring. I combined material from my past experience with the accumulated information about the San Francisco watershed archived at SalvaNatura to design the training that is described in more detail in the next section.

In San Francisco Menéndez, the focus group consisted of the members of the existing Development Association or ADESCO. The association members were community leaders who were informally elected, or mutually selected to be members of the association. They operated independently of elected town officials and theoretically were independent of party politics. The role of the association was ambiguous, its responsibilities included: 1) prioritizing town problems and investigating possible
solutions; 2) planning and managing community development projects; 3) organizing residents to participate in labor intensive community improvement projects (e.g. building a school); 4) bringing in outside technical resources and funding when necessary.

The ADESCO had been very busy managing a latrine project and a Lorena stove project. Both were initiated and funded by the Green Project. One of the self-criticisms that emerged during the focus group discussion with the ADESCO members was their lack of initiative. The projects they had been managing were all handed to them by outside development interests. They also felt certain that the town’s economy would change significantly with the opening of the national park. This raised the issue for a training program on community-based project planning and management. I spent the next month concretizing the training topics, piecing together a rough needs assessment and conversing with the potential participants.

The third focus group consisted of rural residents within the Tacuba municipality. The participants raised several issues with regard to their relationship with El Imposible. Similar to San Francisco Menéndez, they expressed their concern about not having access to fresh water within the park boundaries. The establishment of the national park brought up many other concerns and a lot of speculation, including: 1) access to sources of fuelwood; 2) loss of cultivable land due to the expansion of El Imposible; 3) the freedom to enter and exit the protected area at their will; 4) exploitation of timber and water resources by SalvaNatura for the benefit of rich businessmen in San Salvador.
Attitudes and perceptions about the protected area held by the fourth focus group, the residents of Tacuba were even more volatile. They saw El Imposible and SalvaNatura as an imposition upon their land and their access to natural resources.

There are three main reasons why the Tacubans' perceptions and attitudes towards El Imposible differed so radically from their counterparts in San Francisco Menéndez. First, the residents of Tacuba were not the beneficiaries nor involved in the five year, rural development project limited to the San Francisco watershed and sponsored by USAID through the Green Project. Second, in San Francisco, from the outset, the national park was an integral part of the development plan. Therefore, the residents had much more information and exposure to the purpose and goals of the protected area. Third, the 1997 political campaigns for municipal mayors were in full swing. The more left leaning platform of the FMLN party targeted SalvaNatura and the national park project as being representative of all that was wrong with the country. Therefore, the little information about El Imposible that existed in Tacuba was overwhelmingly negative.

As a result of the focus group discussions and the existing tenor of negativity toward the protected area, the Tacubans elected to focus the training on strategies that would ensure that the priorities of the communities are included in the management of El Imposible. I spent the next month developing the needs assessment and conversing with potential participants about the content and structure of the Liaison Committee training.
Description of the Training Programs

In April of 1997, I returned to the United States armed with relevant training topics, reams of notes that needed to be untangled into three separate needs assessments, and the knowledge that at least fifteen eager participants for each of the training programs awaited my return. I spent the next two months designing the training programs to address the selected topics in such a way as to maximize participation and ensure that the tenets of critical pedagogy were woven into the design.

An underlying purpose of all the training programs was to create a more horizontal relationship between the communities and the NGO managing the park. The training programs were based on principles of adult education and the philosophy of participatory learning and action. The training design needed to embody the nonformal education principle of being context-dependent. The training programs had to focus more on creating opportunities for dialogue and consensus-building than on the transmission of a particular method or technique. The training incorporated the well documented components essential to adult learning including:

1) Adults are voluntary learners. They learn best when they have decided to attend the training because it satisfies a concern that is directly relevant to their lives.

2) Adults come with a lifetime of experience and it is important to create a learning situation that recognizes that experience. The focus of the training sessions should be to create an environment that encourages the sharing of that experience.

3) Adults learn best in an atmosphere of active participation.
4) Adults come with an intention to learn. If this motivation is not supported, they will switch off or stop coming (Smith, 1983).

Each of the training programs had to share a common methodology and philosophy based on the concept of critical pedagogy. The programs were designed to be learner-centered and emphasized process more than content. The underlying assumption for each of the programs was that people have both the right and the responsibility to assess their own needs and mobilize resources to address those needs, and to create solutions to solve their own problems. The process of participation in the training programs implied learner empowerment. Concepts such as self-reliance, local control and collective action were regarded as elements integral to effective community development.

The programs were designed to gradually shift responsibility of the training from the facilitator to the participants over the course of the program (Kindervatter, 1979, p. 246). They were designed so that in the early stages of the training the facilitator directed the participants in order to make them feel comfortable and allow them to “buy into” the process. Ideally, once the participants felt more comfortable with one another and with the overall process they would begin to control more and more of the training. The training programs were designed to purposefully lead participants through a series of reflection and action. The participants would identify dissatisfaction with some aspect of their lives related to the training topic. They would then stop and reflect critically upon that issue, investigate any new information or skills they needed, then plan an action. An unwritten goal common to each of the training programs was to engage participants in this
praxis so that they would assume greater control over the training and, hopefully, transform their lives.

Use of Visually Oriented Materials and Methods

Many of the training sessions employed visually oriented methods and materials (participatory diagrams and visualizations). I purposefully used visual methods to take advantage of the participants’ inherent ability for visual literacy and because “... the impact of visual methods on communication and critical reflection can be profound” (Pretty, 1995). I tried to use visually oriented materials as much as possible to allow nonliterate, low literate and literate people to participate in the process as equals. I also tried to display and organize collective work in a visual way.

Literacy skills were not necessary for the construction of complex diagrams. Even though it seemed that the majority of the participants had some reading and writing skills, it varied quite a bit and those that did not were hesitant to admit their limitations. The visualizations therefore allowed those who have not learned to read and write formally, usually politically weaker and poorer than their literate neighbors, to participate in the process of analysis and discussion.

Diagrams and visualizations generated during the training programs were central to participatory analysis and learning. They worked because they provided a focus while participants discussed an issue. They created situations which fostered horizontal dialogue between the traditionally more powerful literate and the powerless nonliterate. Visual materials led to a kind of collective cross-checking which simultaneously developed the participants’ skills to work in groups. Often times the visual diagrams led participants’ to
express insights and different kinds of associations that were never before considered.

These activities also created generative themes which stimulated older participants to express past situations and their relationship to the current context.

Summary of the Training Programs

Title: Community Based Water Quality Monitoring (Water Training)

Duration: Three consecutive days

Participants: 17 total (5 women and 12 men) including: school teachers, small farmers, community leaders and selected students from the San Francisco watershed. All of the participants had basic reading and writing skills.

Description: This three day training focused on participatory inquiry methods. Participants practiced low cost, low tech methods to assess water quality, then they planned strategies to motivate others in the community to participate in the watershed investigation and collectively act toward resolving identified water quality problems.

By the end of the workshop the participants were able to:

1. Define different sources of potential contamination in their community and describe the link between water quality and human health.

2. Prepare and implement simple low technology, low or no cost methods for monitoring and assessing the quality of water in rivers, wells and other sources of potable water.

3. Develop an action plan that involved other people in the community in a collective investigation of some aspect of their own watershed.

The workshop was designed to be implemented at the community level for the community members who demonstrated an interest in furthering their understanding of
water resources in their community. The fundamental questions, Why? What for? How? Who? When? and Where? were used to guide the workshop and ensure it responded to the participants' needs. As much as possible, the workshop attempted to elicit and integrate the participants' experience and knowledge about water quality, water purification and the prevention of the spread of waterborne diseases.

The workshop was divided into the following five themes:

1. A collective examination of the participants' relation to water and the watershed.
2. An investigation of the effect of water quality on human health and what could be done to assess and improve both water quality and human health.
3. A field investigation of the present situation in the San Francisco watershed, river, groundwater sources and cisterns in homes around town.
4. A collective analysis of the field investigation and a dialogue about why there were problems and what could be done to protect water quality and improve human health.
5. Time to reflect and draw conclusions from the experience, followed by small group development of action plans in order to motivate others in the community to address water quality issues.

Upon completion of the training the participants worked in small groups to develop five different action plans. The purpose of the action plans was for the participants to design strategies to motivate others in the community to participate in the watershed investigation and collectively act toward resolving identified water quality problems.
2. **Title:** Community Based Planning and Organization (Organization Training)

**Participants:** 15 members (3 women and 12 men) of the development association of San Francisco Menéndez. Two participants did not have reading and writing skills.

**Duration:** six, 2-3 hour sessions on a weekly basis

**Description:** The goal of the training was to produce a year long development plan for the town of San Francisco Menéndez. The training consisted of hands-on sessions in which the participants went through a seven step strategic planning process. The steps were: 1) problem identification; 2) analysis of the problem (Who is affected? Who pays? Who benefits?); 3) possible solutions; 4) selecting the preferred solution; 5) planning the project; 6) design of a monitoring and evaluation system. Other topics covered in the sessions included group dynamics and team building, the role of the change agent, understanding change and resistance to change and an examination of leadership styles.

Each training session covered a planning step. The sessions began with an open discussion in which the participants shared their experience related to the training topic. Each session followed a gradual progression from open discussion to concrete work on a specific action plan step. By the end of each session the participants came to a consensus of what needed to be accomplished that week and usually had a working draft to guide them. Due to the large disparity of literacy skills, visual materials and diagrams were utilized as much as possible. Even though the final plan would eventually be produced in written form, there was a deliberate effort on the part of all the participants to ensure that each member of the development association understood and agreed to each of the planning steps.
The sessions were designed so that the participants had several opportunities to reflect upon and analyze what they were doing and why they were doing it. This process required that individuals consider their own interaction within the group. Between planning activities the participants engaged in group dynamics which encouraged them to consider their own function within the larger group.

3. Title: Building a Bridge between Rural Communities and SalvaNatura: Formation of a Liaison Committee (LC Training)

Participants: 18 community leaders (1 woman, 17 men) from six different caserios or villages in the municipality of Tacuba. Several did not have reading and writing skills.

Duration: Five Saturday afternoons.

Description: The goal of the training was to enable the participants to form an effective team that would fairly represent community interests and actively work with SalvaNatura in managing El Imposible. Topics included: group dynamics and team building, the role of the change agent, understanding change and resistance to change, leadership styles, facilitation skills, how to do a participatory needs assessment, participatory project planning and management.

Research Methods

Data gathering, analysis and reporting methods used in this study were primarily ethnographic. Over the course of this project, I gathered data during community meetings, visiting individual farmers, walking around town, accompanying community promoters in environmental education to schools and agricultural extension visits to small
farmers. The methods of producing and obtaining data for this study were divided into two categories: 1) qualitative research methods in which I used to obtain data; 2) participatory methods in which the training participants generated data about themselves, during the training programs. In this study I refer to the former as qualitative methods and to the latter as participatory methods.

Qualitative methods included: participant observation, open-ended interviews, focus group discussions. Participatory methods included: community maps, community generated problem analysis, written journals produced by participants, and participant action plans.

This section is divided into two parts: the first part will focus on the design of the qualitative research methods used in this study, while the second will focus on the design of the participatory research methods.

**Participant Observation**

Participant observation accounted for a large portion of the data used in this study. The design of the study and the kind of information obtained demanded my first-hand involvement with the participants of the study. The other research methods employed in this study were completely dependent on my own immersion and the depth of my comprehension about the community and the context in which the participants lived.

From the very beginning, by adopting a research strategy that demanded my total immersion, I was engaged in some form of participant observation. During the first ten weeks of the research, I dedicated the majority of my time immersing myself in the communities surrounding the protected area. I distributed my time more or less equally
between the two principle municipalities adjacent to the protected area, San Francisco Menéndez and Tacuba.

I tried to learn as much as I could about daily life. I spent my days working with small farmers in the fields, harvesting fuelwood with women and children from the hills surrounding El Imposible, participating in soil conservation training with SalvaNatura promoters, accompanying park guards on their daily patrols, attending water and other community meetings.

From the outset, I was clear about my presence and purpose as a researcher. I was genuinely interested in how people lived and wanted them to show me what they did and why they did it. This attitude contributed greatly to the amount and quality of information I received. By showing my genuine interest in what was going on, often times individuals I interacted with would go to great lengths to demonstrate what they did and why they did it. The process of focusing on what villagers were doing rather than asking them directly what they were thinking, usually led to less inhibited conversation and a frank description of the problems they faced.

I would take fieldnotes daily. Whenever possible I took immediate notes of observations and encounters as they were happening. In the evenings, I took the time to expand on these notes and reflect on the day. I made notations about events which especially impressed me. During the actual training sessions my notes were especially rich. At the end of the day I would use the lesson plans as a guide to temporally and spatially reflect on important events (such as a revealing question, or discussion) that happened during the training. Most of the training involved small group activities, or
open-ended discussions. This allowed me to observe discussions and interactions among the participants. Immediately after the training, or sometimes in the evening I would record the information and make notations in the margins of interactions that seemed especially noteworthy at the time.

**Semi-structured Interviews**

Over the six-month course of this project, I completed 23 interviews with 17 different people. This included twelve semi-structured interviews collected from six different community members who participated in the training programs, as well as eleven other individual interviews with community leaders and SalvaNatura representatives. The interviews I conducted were semi-structured and open-ended. Usually the interviews were recorded. In some cases the presence of a tape recorder would have created a sense of artificiality and diminished the rapport I had established with the interviewee. In those cases, I did not record the interview instead, I chose to fully engage the interviewee and post-pone detailed note-taking until immediately after the interview. Similarly, for the taped interviews, later the same day I would review the tapes and write down my impressions. The recordings were eventually transcribed in Spanish, and any notes were incorporated into the transcriptions.

The interviews included in this study were completed on my second visit. Only after having established a comfortable rapport with an individual did I consider interviewing him/her. All of the training participants had participated in meetings in which we agreed upon the content and length of the training programs and I explained the purpose of my research. I made sure that interviewees understood that our conversation
could be included in my research and that their participation was entirely voluntary. Also, I tried to have them sign a consent waiver prior to the interview. During the interview, I was often assisted by my key informant. My assistants were well known by everyone in the village and their simple presence lent a measure of familiarity to the interaction. They assisted me during the interview by occasionally clarifying the heavily accented local vernacular and often helped me rephrase an ambiguous question.

The community interviewees were all community members who were participants in one of the training programs. Soon after the interview, I would process it with the youth and many times he/she would cross check information. This was especially true for topics and activities that were common to the entire community such as farming practices, fuelwood collection and tenure arrangements.

The format of the interviews was semi-structured, which, for the purposes of this study can be defined as, “Guided conversation in which only the topics are predetermined and new questions or insights arise as a result of the discussion and visualized analysis” (Pretty, 1995, p. 73). Prior to the interview I was clear about the information I intended to acquire, but unlike structured interviews I wouldn’t concentrate on specific questions. In this sense, most of the interviews with the community members were not formal interviews per se, but occasions for us to exchange views on life, the park, hopes and dreams. I realized then, and even more so now, that I could not have made it a formal interview structure and found out what I did. I was very aware of the context in which the interview took place. More often than not, the interviews resembled conversations in which I responded to as many questions or more questions than I asked. The time of day,
the location, other people who happened to be nearby, all had a profound effect on the depth of the conversation and the quality of the information. The interview encounters took place in various situations that normally occurred for the villagers. At times I would be walking through cornfields, feeding chickens, harvesting corn or sharing a meal.

One particular interview lasted more than a week. Most of that time was dedicated to establishing a rapport and a pattern. I would arrive at the home of one of the town leaders, who happened to be a park guard. His home is situated about 50 meters uphill from the rest of the town at the park boundary. I would arrive every evening and sit on a bench under a shade tree which encompassed his home. While waiting I played with his children and conversed with his wife or older son. Eventually he would emerge from the dinner table. For about four evenings our conversation was limited to weather, farming practice, and day to day happenings in the park. Not until the fifth encounter did our conversation steer toward the topic I was most interested in learning, namely, his relationship with the rest of the community since he assumed the position of park guard.

The setting, mood and surrounding activity of the interviews all contributed to my understanding of the interviewee’s life and the complex dynamics that shaped his/her lifeworld. I was able to construct a bank of impressions, both physical and subliminal, which provided me with a base for the interpretation and analytical use of the data that emerged from this study.

Focus Groups

A focus group is practically an “interview with a small group of people on a specific topic” (Patton, 1990, p. 335). The focus group method emerged from the field of
social marketing in which advertisers surmised that consumer decisions are made in a social context, often growing out of discussions with other people. For the purposes of this study, I used focus groups as a research method to obtain information from a small (up to 15) group of participants. During the focus groups participants reflected on issues and questions I presented to them. Unlike a training session or community meeting, the participants were discouraged from discussing or collectively analyzing an issue. The primary purpose was for me to obtain information and perspectives in a safe, social context where people could consider their own views in relation to the views of others.

For this study, seven focus group sessions were conducted. The four that were conducted before the training programs are described in the previous section. Three others were conducted about one to two weeks following the training programs. About 10 to 15 people attended the focus group sessions, and about half the people attending the post training focus groups were not part of the training group. They were there because their colleagues brought them.

Participatory Products and Analysis

A large portion of the research data was generated and to some degree analyzed by the participants of the three different training interventions. While designing both the research project and the training programs, I was constantly considering the following questions: What form will the research take - and who will decide? Who will participate in the generation and analysis of the data? Whose knowledge or experience counts? Research for what and for whom?
The purpose of the research was to assess the impact of the training interventions from the perspective of the participants. I did not want to treat their knowledge methodologically. The kind of data relevant to this component of the study is not something which could be discovered or easily researched. It is produced through the interactions of people, in particular situations (although as a facilitator, I had a lot of power shaping those situations). An outside researcher interpreting these interactions converts the process to "data". This kind of data by its very nature is subject to a double hermeneutic, interpretation by first the researcher, then the reader (Habermas, 1972). Therefore, the most important part of the participants' construction of their reality is denied.

The participatory data included in this study consists primarily of discussions and products generated during the training sessions themselves. It includes some diagrams and other visualizations. In Chapter VI of this document, I have included some portions of this participant generated data.

The framework featured in Chapter V of this study is the result of a process of analysis and interpretation of all the data. Although in the development of this final framework I combined the participant generated data with the researcher controlled data, during the analysis I was extremely cognizant of the source. This attention to the data's source not only allowed for a more profound triangulation, but also provided me with invaluable hermeneutical insight as to how my own bias affected the interpretation of the data.
Analysis of the Qualitative Data

Data analysis consisted of several layers. Data were first analyzed inductively immediately after collection. Denzin’s five stages of inductive analysis generally guided the process. This can be summarized as first, immersion in the situation; second, incubation for reflecting on the experience; third, a phase of illumination for expanding awareness; fourth, a phase of explication that includes description and explanation to capture the experience of individuals in the study; finally, hopefully, order, structure and more importantly, meaning can be derived from the lived experience (Denzin, 1978).

Over 200 pages of hand written notes and four one hour tapes were examined according to the coding procedure outlined by Bogdan and Biklen (1992). I describe my analysis of the data in greater detail in Chapter V.

Trustworthiness of the Data (Validity)

To ensure trustworthiness three validation strategies were employed. First triangulation, in which data were sampled from different sources using different techniques. Sources of data included participants in the training program, other community members, key informants, colleagues from SalvaNatura and existing documentation of completed community appraisals. I also used different methods of data collection: participant observation, interviewing, focus groups, discussions during the training programs and materials generated during the training programs. I was especially sensitive to variations between data gathered by the researcher and participant generated data.
Second, whenever possible, data and interpretations were verified with the people from where they were derived (Patton, 1990, p. 468). Often times, data were cross-checked with the key informants that accompanied me to many of the interviews. Clarification and corrections were made on the interpretations. The fact that I interviewed the same people before and after the training programs facilitated this process.

Third, I tried to be as consistent as possible in my research methods. For example, all the interviews were conducted about the same time in the evening. This was when the interviewee was most likely to be available and relaxed without conflicting demands for his/her time. I also kept extensive notes as to the implementation of the research methods. By doing this, I was able to record the context in which the data were collected. By gathering my own data, I was able to minimize any distortions due to variations in the data-gathering methods.

Fourth, well before initiating the research, I attempted to recognize my own bias. In Chapter I, and other places throughout the text, I make an effort to identify my assumptions and how they may have affected data acquisition and analysis. I wholly embrace the principles of hermeneutics, and understand that as the sole researcher all the collected data, to some degree, has been filtered through my own conceptual framework.

**Interpretation of the Data**

The process for generating the assessment framework necessitated substantial interpretation of the raw data. This was a crucial part of the research process. As Michael Patton tells us:
The researcher who has studied the program, lived with the data from the field, and reflected at length about the patterns and themes that run through the data is in as good a position as anyone else at that point to speculate about meanings, make conjectures about significance, and offer hypotheses about relationships (1990, p. 423).

However, I have been careful to consider the data holistically. While analyzing the raw data, there have been several occasions when I have been tempted to draw causal relationships based on a single data point. It has been a struggle to balance between a description of what has occurred and my interpretation of what has occurred. Despite the abundance and complexity of the accumulated data, I purposefully strove to gain an overall perspective to avoid an oversimplified, cause and effect interpretation of the data. In the following chapter, I elaborate on the procedure for data analysis.
CHAPTER V
BUILDING A FRAMEWORK FOR ASSESSMENT

An Assessment of What? For Whom?

Although this study fits within the field of evaluation, the purpose and design of this study differs substantially from a traditional evaluation of training. I would like to reaffirm that the purpose of this study is to further the understanding in the field of rural development about the potential benefits and limitations of participatory methodologies as they are applied to rural communities. It is not the intent of this study to measure the extent to which the training objectives have been met. Nor does this assessment component necessarily respond to the needs and concerns of the people who participated in the training.

Even though this study is about a participatory process and much of the data has emerged from a participatory process, the reader must understand that it is not a participatory evaluation. The assessment that is the focus of this study was controlled by me and responds to my concerns as a researcher. The training programs, for the most part, belonged to the participants. The participants identified the problems to be addressed by the training, then investigated and planned the actions to resolve them.

The purpose of this chapter is to present the assessment framework that was developed in the study. First, I review the theoretical foundations and previous work
dedicated to this topic. Then, I present the broad categories of assessment which initially
guided my analysis and organization of the data.

What is an Outcome Assessment?

Confounding Terms in Research and Evaluation

Evaluation of the impact of a training program is difficult in the best of
circumstances. Shifts in behavior might be observed in some cases where the evaluator
has the luxury of interacting with the participants while they are applying their newly
acquired skills to their work in the community. But even then, the timing of the evaluation
presents a major obstacle. Do actions immediately following the training intervention
represent an impact? Or, must the change occur for several years after the training to be
considered a successful impact? Community development is a long term process. Tracing
the impacts of training in a rural community to the furthest limits of change in society is
rarely possible. The design of a good impact evaluation will focus on the effects of
training and development interventions as far as possible down the cause and effect
sequence. The inherent difficulty with this process is that the further down the sequence
one goes, the more difficult it is to attribute the impact to the initial intervention. Using
this model, tracing the impacts of training to the furthest limits of change in society is
nearly impossible.

The scope of this study is limited by time and resources. The study focuses on
three phases of assessment: 1) the participants’ thoughts, actions and attitudes prior to the
training and during the design of the training programs; 2) their thoughts, actions and
attitudes during the training, including any products they generate; 3) their thoughts, actions and attitudes shortly following the training, including any direct outcomes of the program. These phases coincide with Rossi and Freeman’s three categories of evaluation: 1) conceptualization and design; 2) monitoring and implementation; 3) assessment of effectiveness (1993). In her book, Evaluating the Impact of Training, Suzanne Taschereau distinguishes impact evaluation from other types of evaluation by the area of the program upon which it focuses. She claims that an impact evaluation is limited to assessing the extent to which “... a program has caused desired changes in the target audience” (1998, p. 2). Of course this implies “measuring” the extent to which training objectives have been achieved. She also states that impact evaluation is summative, meaning it can only happen upon completion of the training (Taschereau, 1998, p. 3). Therefore, rather than challenge the positivist limitations that the term “impact evaluation” implies, I will consider this study to be an assessment of training outcomes. For the purposes of this study, outcomes refers to the intended and unintended, immediate and short term results of a training program.

Theoretical Foundations for Assessing Training Outcomes

One thing which is inherent to all training programs designed for participants from developing countries is that they all base their pedagogical approach on a set of development assumptions. These assumptions determine the goals strategies, curriculum and evaluation criteria of the program (Adelman, 1981, p. 93). Many of the concepts of critical pedagogy are incompatible with conventional assessment tools. Measuring the consciousness-raising aspect of an educational program based on one set of assumptions is
conceptually impossible using methodologies and instrumentalities derived from a competing set of assumptions.

In his article, *Consciousness-Raising Education*, Adelman reviews the evolution of two different schools for determining and valuing the outcomes of rural educational programs in less developed countries. The equilibrium paradigm, or modernity, perceives underdevelopment to be a condition of economic, social, technological and information deprivation. Therefore, the purpose of development is to resolve specific problems within the existing system with economically linked inputs. The basic assumption is that the key to development is to increase production and consumption. Underdevelopment is attributable to individual inadequacies and not economic or political structures. Therefore, the aim of educational programs is to enable people to participate more effectively as producers and consumers in the capitalist system, thereby converting a “traditional” way of life to a modern way of life (La Belle, 1976). Training within the equilibrium framework focuses on developing skills and modern values such as “...‘entrepreneurship’, or ‘risk orientation’ so that they will be more inclined to behave in a certain manner beneficial to their own and their nation’s economy” (Adelman, 1981, p. 94).

Adelman refers to the alternative paradigm as the conflict, or critical, framework. The conflict, or critical, framework argues that underdevelopment results from the political and economic system that is controlled by larger worldwide structures and influence. Two forms of power are distinguished: 1) normative control derived form cultural, political and social influence over values that determine attitudes and behavior
and 2) structural control derived from political and institutional control over actions. The conflict framework of education emerges from Frank’s and other dependency theorists’ critique of the capitalist system (1969). Dependency theorists identify an inherent structural dualism within capitalism. This dualism consists of a series of unequal economic and social exchanges favoring the larger economic “centers”, namely the developed countries or the relatively wealthy urban sector, over less developed countries or the traditional, rural sector. Part of the Dependency Theory analysis posits that, coercion and domination are accomplished not only through economic and political means, but also through the schools, the church, the media and other social mechanisms which prohibit the marginalized sectors, or the periphery, from participating in the decision-making process (Adelman, 1981, p. 95). Most of the educational implications from a conflict frame are associated with a critical pedagogy designed to expand an individual’s critical understanding of his/her reality. Educators operating from a critical frame criticize conventional education as a tool for dominating or oppressing the poor (Freire, 1972; Reimer, 1970; Goulet, 1971; and Illich, 1971). They point out that transferring information from an authoritative source to a passive recipient does nothing to promote the receiver’s growth as a person capable of shaping her/his own world.

The most common criticism of training programs based on critical pedagogy is that they neither teach productive skills and behavior nor do they contribute toward national economic development (La Belle, 1972). Applying an equilibrium frame evaluation tool, meant to measure quantitative outcomes such as production or income, simply reinforces critical training’s valuelessness to society. But training programs with the hidden or
explicit goal of consciousness-raising or "human liberation" require a different set of criteria and assumptions for evaluation. Adult education based on a critical paradigm assumes that once learners are aware of their own reality within an oppressive system of unjust social structures that keeps them marginalized, they will move toward community action (Adelman, 1981, p. 96). Critical pedagogy endeavors to enable individuals and groups to comprehend their oppression and act to overcome it. Outcomes should be assessed by the individual and collective processes that take place and should not be "measured" by quantitative indicators such as income generated or latrines built. It is clear that measures of production skills are at most marginally appropriate for assessing activities designed to enable individuals to initiate an internal process of reflection and transformation. Several authors suggest such esoteric and subjective concepts such as personal liberation, social transformation and critical consciousness can never be completely assessed and attempts to do so are extremely vulnerable to the researcher's hermeneutical distortion (Graybill, 1989, p. 324; Adelman, 1981, p. 97).

Assessing Critical Consciousness

Research of an empirical nature on the impact of education programs utilizing participatory methods and critical pedagogy is scarce. There have been a handful of attempts to operationally define critical consciousness. A coding system based on Freire's three stages of consciousness was developed by the Center for International Education's nonformal education project in Ecuador in the 1970's.

Will Smith and his colleagues developed the coding system for determining the degree of conscientizacao an individual has attained. The system was inspired by David
McClelland's work on the development of the achievement motive (1961). The instrument consisted of a set of culture-specific visual stimuli and a standardized set of questions to elicit characteristic responses to three questions: What is the problem (naming)? What are the causes (reflecting)? and, What can be done about it (acting)? (Smith, 1976, p. 5). The responses were then compared to Freire's theoretical framework of consciousness and a code was developed. Using the code, individuals could be placed into one of the following three categories of consciousness: magical, naive or critical.

A primary justification for developing the coding system was an attempt to ground Freire, whose writing Smith describes as "...vague and largely value-laden principles written in a philosophical style which has confused many individuals, particularly individuals more interested in practical answers than in dialectic problem solving" (1976, p. 6-7). Smith critiques past attempts of evaluating programs based on Freire's critical pedagogy as being focused only on behavioral results which may or may not be relevant. The coding system purports to measure consciousness as it is defined by Paulo Freire.

Using the coding system a person's expressions, interactions within the community and/or responses to questions could all be used to identify his/her level of consciousness. Statements which connote a sense of resignation or individuals limiting their actions to passive acceptance of the situation, are all indicators of people operating at the magical level of consciousness.

Individuals at the naive level of consciousness accept that there is a problem. They can identify specific individuals or circumstances causing the problem, but their
understanding does not go beyond blaming individuals. They fail to see the nature of oppression as systemic or structural that "coerces both the oppressed and the oppressor" (Smith, 1976, p. 57). They naively assume that humans are basically free agents, independent of the socio-economic system that surrounds them. Naively conscious people will hold specific individuals responsible for problems and see the solution as being within the system. Comments such as, "...if I only worked harder I would not have lost my house." or "...he will always be a campesino because he could not afford to go to school."

At the third level or critical consciousness, the solution lies in transformation of an unjust system, rather than the reformation or destruction of certain individuals within a system (Smith, 1976, p. 60). This process of achieving critical consciousness consists of a personal transformation coupled with praxis or a conscious effort to replace an unjust system with a just one. A person manifests this level of consciousness not by blaming individuals, but rather by demonstrating a profound comprehension of her/himself within a system that coerces both the oppressed and the oppressor into collusion. Statements such as, "...the government extensionists are always trying to control us. Why can’t they let us decide for ourselves.", or "we can’t send our children to school because the oppressors are threatened by education" are examples of critical consciousness. Actions are aimed at either expanding one’s world or transforming the system. Reliance is placed on community resources rather than dependence on outsiders. Accompanying the increased reliance on community there is also a higher level of self-assurance, which "...may appear to the oppressor as arrogance" (Smith, 1976, p. 65). Deliberate efforts are made to comprehend and define problems. Individuals strive to educate themselves about issues
affecting them by discussing, reading and traveling to other parts of the country.

Reflection and action become an integral part of an individual’s character, a constant cycle of thinking and doing designed to expand one’s lifeworld. Community leaders that engage in bold acts of resistance such as demonstrations, or labor strikes are functioning at a critical level. They are less afraid of change as they are outraged by the status quo.

The adult educator Jack Mezirow’s work on perspective transformation parallels Freire’s concept of movement from naive to critical consciousness (Mezirow, 1981, p. 8). Based on his work with women participating in college re-entry programs, Mezirow suggests that the “…existential challenge of adulthood involves an irregular succession of transformations in meaning perspective…[These are] the structure of psycho-cultural assumptions within which new experience is assimilated and transformed by one’s past experience” (1981, p. 6). The process of perspective transformation is the process of developmental passage and growth through meaning perspectives to achieve a more critical state of consciousness. His theory on andragogy is founded upon Habermas’ conceptualizations of the three primary kinds of knowledge (instrumental, communicative and emancipatory) (Habermas, 1972). He proposes the three domains of adult learning to be: a) controlling and manipulating the environment; b) social interaction; and c) emancipation or critical consciousness (in Graybill, 1989, p. 17).

In Mezirow’s view of critical theory, this educational process is manifested in distinct ways at the three levels of adult learning. The first, learning to control and manipulate the environment, involves acquisition of knowledge which may be characterized as empirical-analytic in content and nature. The second, social interaction
focuses on interpreting the way an individual and others with whom he/she interacts construct meaning. Mezirow views the emphasis of the third learning domain as emancipation. Here the learner has the capacity to identify real problems rooted in unjust power relationships inherent to "... institutional ideologies which one has internalized in one's own life history" (Mezirow, 1981, p. 18).

Adelman points out another coding system developed by political scientist's Almond and Verba which seeks to define an individual's relationship with the power structure (1981, p. 98). R.A. White devised a methodology for measuring the impact of consciousness-raising activities employed by the Popular Promotion Movement in Honduras (1977, p. 236-237). Adelman completed a study of grassroots farmer discussion groups in Colombia that attempted to gauge the consciousness level of community leaders by observing their leadership roles. He portended that leaders who facilitated discussions, as opposed to leaders who preached, were at a higher level of consciousness (1981).

In *Training for Transformation*, Hope, Timmel and Hodzi present an exercise to help people critically assess different levels of consciousness (1984, p. 56 - 60). In the assessment chart they developed for the exercise, the authors present four levels of consciousness. The levels closely correspond to Will Smith's and are labeled: 1. Closed or Broken Consciousness; 2. Awakening Consciousness; 3. Reforming Consciousness; 4. Liberating and Transforming Consciousness.
Participatory Evaluation

More recently, educators have pointed out that consciousness-raising impacts of training are highly individualized and can only be assessed from a participant’s situation and history, or lifeworld. Therefore, the only source for determining the extent of human liberation are the training participants themselves. The participants must validate their own knowledge and experience, and engage in a processes by which they systematically analyze their own reality to increase self-reliance and self-determination (Campos, 1990, p. 34).

Theoretically, trainees who engage in praxis and assume increased power during the course of the training are enabled to transfer those same skills and attitudes outside the training program. In her study of participatory evaluation, Campos suggests that as a result of participatory training it is assumed that: 1) Participants will work to transform their communities; 2) Participants themselves will change for the benefit of the community; 3) Participants will be motivated and enabled to participate in the decision-making process and hence, assume responsibility for their own welfare; 4) Participants as subjects are capable of critical reflection and active intervention upon their own reality (1990, p. 67).

The best, and some may argue, the only evaluators qualified to determine the extent to which the above objectives have been fulfilled are the training program participants (Campos, 1990; Feurstein, 1988). Participatory evaluation is reflective and action-oriented. The training participants reflect on their own training progress, clarify collective goals and objectives and generate knowledge that leads to corrective action and
improvements wherever necessary. Simply by engaging in the praxis of participatory
evaluation participants are developing the tools for transforming their environment.
Participatory evaluation recognizes the wide range of knowledge, values and concerns of
stakeholders within their own context and acknowledges that these should generate the
standards that guide the training outcomes (UNDP, 1997).

Building a Framework for Assessment

Determination of the effects of the training program has involved a long process of
screening the full range of data and coding the information. The data were organized into
categories that correspond to a continuum of evaluation criteria for training which ranges
from the very concrete, such as digging contour ditches for soil conservation, to the
abstract, such as achieving a higher level of critical consciousness. The Inter-American
Development Foundation’s annual report for 1977 provides an excellent model for the
broad categorization of impacts. It uses “standard of living gains” to refer to the
achievement of traditional sector, or more concrete objectives that indicate a population’s
level of economic and social development. It uses the term “social gains” to categorize all
the impacts that enable people to “... develop their potential and, through their own
efforts, achieve their aspirations for a better life” (IAF, 1977, p. 75).

For this study, I based the framework on three broad areas. The categories
generally flow from concrete to abstract in ascending order. The three areas are: 1) Economic, environmental and health benefits to the community; 2) Increased capacity for
organizing which leads to collective action toward the resolution of specific community
problems; 3) Increased level of individual or collective critical consciousness. The following is a description of each of the areas.

1. Environmental, Health and Economic Benefits to the Community:

   An assumption of the training focusing on watershed monitoring and protection was that the outcomes would lead to maintaining or improving the quality of the Rio San Francisco. Lower pesticide use and reduced soil erosion are two of the long term impacts one might expect from this training. Measuring these kinds of impacts can be costly, and technical. For example, an elaborate and expensive systems for monitoring the physical, chemical and biological changes in the river could be set up to assess the change in water quality over time. Such a monitoring system would not even require farmer participation. Though somewhat useful, because such a system could provide measurable and reliable data, technological practices for assessing the impact of training on the environment were contrary to the participatory design of this study. Even if the equipment, time and resources were available, such a monitoring system would not completely address the research questions. The purely physical data would not define the causal relationship of the training program to the quality of water in the river.

   Data that were coded into this category include products generated during the training, conservation practices adopted as a result of the training and participants' expressed intentions toward the protection or degradation of the environment. For example, as a result of the training on watershed protection, a low cost, low technology community based water quality monitoring system was established.
For health, impacts can be measured by counting such indicators as lost work days in the field, stomachaches, headaches, visits to local clinics by children for waterborne diseases and other common illnesses related to unclean water sources. For this study, data that were included in this category consisted of behavior or comments that emerged during or immediately after the training which directly affected an individual’s or a household’s health. For example, two participants from one village actively petitioned different organizations for a latrine project.

Economic benefits are by far the most sought after by the residents of the community and by SalvaNatura. The investment of time and energy in the training programs by the participants comes with some expectation of an immediate tangible economic benefit. In the case of the organizational development training, participants developed rural development projects which included plans to access outside funding. In the watershed monitoring training this included access to materials and technical assistance for the construction of a household latrine.

Similarly, the sponsors of the training programs - SalvaNatura, GreenCom or USAID - expected some form of direct or indirect economic benefit to the farmer, the community, the protected area and eventually the nation. Though, unlike the training participants, the sponsoring organizations may consider nonformal training programs to be a long term investment. For SalvaNatura, the long term economic benefit, included fostering better community relations in the management of the protected area, thus reducing expenditures on law enforcement and restoration of degraded areas. From the participants’ perspective, a long term economic benefit derived from the watershed
monitoring training might include more sanitary conditions which lead to better health, which lead to more time in the fields and less time and expense at the health clinic.

2. **Capacity for organizing which leads to collective action toward the resolution of specific community problems.**

An assumption is that training in participatory planning and leadership methods should lead to better community organization. Factors to measure include the frequency of meetings and the number of people actively participating. Other considerations are the focus or goal of the organizing, community activities actually implemented, and the level of local funding or contributed time and labor toward development projects. Following the training, program participants may not focus solely on the topics covered in the training; for example watershed monitoring. But if participants organize the community to take on other issues, then the impact of the training will be much greater.

This category of potential training outcomes is especially sensitive to other factors which may catalyze or discourage community organizing. The impact of the training program might be boosted by other inputs from other projects. Or, the possibility of funding may catalyze short term collaboration around a single project that disintegrates soon after the funding dries up. The complex barriers to community development might overshadow the participants’ best intentions toward community organization and development. Organizing might entail great physical or professional risk to the organizers due to political oppression. Competing social programs such as credit schemes sponsored by public or private banks could inhibit farmers from organizing. In El Salvador, existing cooperatives tend to act independently of any kind of coordination at the community level.
Therefore, trying to discern the amount of influence a particular training program has on overall community organization can be dangerous. No community, or for that matter individual participant will ever be completely isolated or exposed to a single variable (the notion of independent variables in qualitative research is carried over from the positivist paradigm). This study attempts to minimize this limitation by focusing on short term outcomes, and carefully recording the expressed intentions of the participants during and immediately after the training programs.

3. Level of individual or collective critical consciousness.

This assessment category encompasses personal liberation as well as transformation in the local community and the whole society. Liberation is the process in which “...the oppressed see themselves as people engaged in the vocation of becoming more fully human.” (Freire, 1970, p. 52-53). It embodies a personal transformation which implies an irreversible qualitative change toward something better, or towards the ideal of an individual reaching her/his full potential as a human.

Note, that as it is being considered here, liberation signifies a deeper level of personal growth than empowerment. The concept of empowerment typically connotes power injected from the outside aimed at shifting the balance of forces towards local interests (Long and Villareal 1994, p. 50-51). While, in order to achieve liberation, Freire asserts that:

The liberation of the oppressed is a liberation of men, not things. While no-one liberates themselves by their own efforts alone neither is he liberated by others. The revolutionary leaders must realize that their own conviction of the necessity for struggle was not given to them by anyone else - if it is authentic. This conviction cannot be packaged and sold; it is reached,
rather by means of a totality of reflection and action. Only the leaders' own involvement in reality, within an historical situation, led them to criticize this situation and to wish to change it (1972, p. 53-54).

Liberation embodies a change in one's lifeworld, or an expanded horizon of the way in which an individual perceives and understands the world, which eventually leads to a change in behavior and attitudes. Liberation is a process not a static end product. It can only happen when an individual, or community, becomes conscientized, and realizes the inequity of some aspect of their present life. Therefore, an implicit goal of any training program grounded in critical pedagogy is to create a secure environment in which the participants could reflect upon their own situation. Although the process is far from straightforward, the facilitator leads participants through a cycle of critical reflection, problem identification, then action planning. The participants themselves select the information and skills they need in order to resolve a problem that they themselves have identified. By engaging in this praxis the training group becomes more and more capable of transforming their daily life.

Incorporated into the concept of liberation is the capacity for social transformation. This is the ability to understand relationships of domination and the capacity to take action toward redefining these relationships based on shared values such as reciprocity, and mutual service (Anello, 1997, p. 301).

As long as the oppressed remain unaware of the causes of their condition, they fatally accept their exploitation. Further, they are apt to react in a passive and alienated manner when confronted with the necessity to struggle for their freedom and self-affirmation ...It is only when the oppressed find the oppressor out and become involved in the organized struggle for their liberation that they begin to believe in themselves. This discovery cannot be purely intellectual but must involve action; nor can it
be limited to mere activism, but must include serious reflection: only then will it be praxis (Freire, 1972, p. 51-52).

Concepts such as self-reliance, self-determination, local control and individual or collective action are regarded as elements integral to social transformation towards effective community development. These concepts are based on the belief that people both have the right and the responsibility to solve their own problems, to assess their own needs and mobilize resources to address those needs and to create solutions to solve their own problems (Campos, 1990, p. 65).

There is a powerful assumption that training utilizing a critical approach humanizes, liberates and transforms participants into subjects who control their own lives. It would be foolhardy, and contrary to the concept of critical pedagogy itself, to try and design a conventional evaluation tool to measure the degree of liberation an individual experiences as a result of a training program. It is impossible to treat "liberation" as an independent variable or product of training that could be measured and statistically analyzed. Liberation is a paradigm for understanding the world based on the totality of a person's experience or lifeworld. Rather than a process for transmitting information, critical pedagogy emphasizes the systematization of people's practical knowledge and its transformation into a structured whole through collective analysis and discussion (Acevedo, 1992, p. 54).

Any consciousness raising goals of training are stated in highly speculative terms which elude translation into standardized indicators that could be applied across training programs. Therefore, the only source for determining the extent of human liberation is the
training participants themselves. The participants must validate their own knowledge and experience, and engage in a process by which they systematically analyze their own reality to increase self-reliance and self-determination (Fetterman in Campos, 1990, p.34).

Certainly, many of the manifestations of this evaluation category will be very similar to the previous category on community organization. Factors to measure include the frequency of meetings and number of people participating and the number of people actively participating. The number of community activities initiated for the purpose of increasing participation or gaining control over an aspect of their own development.

Creating the Framework for Assessment

Analysis of the Data

The framework for presenting the data accumulated in the course of this study is more a creative exercise in discovery rather than a formal evaluation tool. Thus, I did not start out with a preconceived menu of what to look for to determine the impact of participatory training on development, but rather, I let the meaning emerge from my accumulated data. By systematically examining the data, including: 1) material generated by the participants during the training sessions; 2) daily observations and insights I recorded throughout the research period; 3) in-depth interviews completed before and after the training programs; 4) focus groups completed before and after the training programs, I was able to detect common characteristics or connections between things that may have been perceived as unrelated.
The framework presented here represents the distilled version of my data analysis. In constructing the framework, I tried to organize the data analysis to accurately represent the full range of short term outcomes that resulted from the training intervention. This framework is the end-product of the data analysis process described by Bogdan and Bilken as, "....working with data, organizing them, breaking them into manageable units, synthesizing them, searching for patterns, discovering what is important and what is to be learnt, and deciding what you will tell others" (1992, p.153).

During my actual field research, as I reviewed the data at the end of each day, I would begin organizing it into general categories. At this stage, the different levels of impacts became clear. Upon my return to the United States, I finished transcribing my data and the recorded interviews. Then I began a more thorough analysis of the data. I grouped the data into the three major themes described in the previous section. The three areas are: 1) economic, environmental and health benefits to the community; 2) the participants' capacity for organizing their community and/or leading collective action toward the resolution of specific community problems; 3) the participants’ level of individual or collective critical consciousness. Once the data were organized into one of the three thematic groups, I began a more thorough analysis. Initially this process involved the identification of 65 different categories within the three themes. When the categories were clearly laid out, I was able to identify redundancy and patterns within the data. As a result of this reduction phase, I was able to pare the data to 15 categories distributed among the three overarching themes. I then converted these categories to the assessment areas that form the base of the framework presented here. The final stage consisted of a
review of the literature to fine tune the organization of the assessment areas within the framework. I developed this final version of the assessment framework by tacking between the data and previous work that has been done on coding schemes for critical pedagogy. The resulting framework for assessment is demonstrated in the Table 3.

**Table 3. Framework for Assessing the Short Term Effect of Participatory Training on the Communities Surrounding El Imposible National Park, El Salvador**

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<thead>
<tr>
<th>Assessment Area</th>
<th>Kind of Indicators</th>
<th>Data Sources</th>
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<tbody>
<tr>
<td>I. Environmental, Health and Economic Benefits to the Community:</td>
<td>A.</td>
<td>A.</td>
</tr>
<tr>
<td>As a result of the training did participants...</td>
<td>i. Participants adopted a specific action which protects soil, water, air or other natural resource.</td>
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<tr>
<td>A. ... change behavior or perform an action that directly affected the quality of the environment or their household’s access to agricultural or natural resources?</td>
<td>ii. Participants established a system for monitoring changes in the environment.</td>
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<td></td>
<td>iii. Participants established a community “ecology club” or other environmental education program.</td>
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<td></td>
<td>iv. Participants planned and implemented an event to share their knowledge about environmental protection.</td>
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<td></td>
<td>v. During or after the training the participants expressed an action that they would do to protect the environment or natural resources.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A.</td>
<td>i. Observation of practices participants implemented during or shortly after the training.</td>
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<td></td>
<td>ii. Transcripts of interviews with selected participants before and after the training program.</td>
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<td></td>
<td>iii. Transcripts of focus groups that occurred before and after the training programs.</td>
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<td></td>
<td>iv. Record of training sessions and notes on interactions that occurred during the activities.</td>
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<tr>
<td></td>
<td>v. Action plans and other products generated during the training program.</td>
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<td></td>
<td>vi. Record of discussions during community meetings</td>
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<tr>
<td><strong>B. change their perceptions about the environment, conservation and/or the concept of a national park (as a conservation entity)?</strong></td>
<td>B. i. Participants visited the park voluntarily, solely for recreation or appreciation of its natural beauty. ii. Participants referred to the Park as a sustainable source for water, trees, air or some other natural resource. iii. Participants recognized potable water, fuelwood or soil as a limited resource that must be sustained.</td>
<td>B. i. Transcripts of interviews with selected participants before and after the training program. ii. Transcripts of focus groups that occurred before and after the training programs. iii. Record of training sessions and notes on interactions that occurred during the activities. iv. Record of discussions during community meetings.</td>
</tr>
<tr>
<td><strong>C. change behavior or perform an action that directly affected the health of their household?</strong></td>
<td>C. i. Participants adopted a specific practice to improve their household’s or their community’s health. ii. Participants designed and implemented an event that enabled them to share their knowledge about preventing the spread of waterborne diseases. iii. During or after the training the participants expressed an action that they would do related to preventing the spread of waterborne diseases.</td>
<td>C. i. Observation of practices participants implement during or shortly after the training. ii. Transcripts of interviews with selected participants before and after the training program. iii. Transcripts of focus groups that occurred before and after the training programs. iv. Record of training sessions and notes on interactions that occurred during the activities. v. Action plans and other products generated during the training program. vi. Record of discussions during community meetings.</td>
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| D. ...adopt a practice or take some action that directly affected their household income? | D.  
  i. Participants adopted a specific practice primarily to augment household income.  
  ii. Participants designed and implemented a community event to promote a microenterprise activity (such as an artisan activity).  
  iii. During or after the training the participants expressed an action that they were interested in pursuing because of its income generation potential. | D.  
  i. Observation of practices participants implement during or shortly after the training.  
  ii. Transcripts of interviews with selected participants before and after the training program.  
  iii. Transcripts of focus groups that occurred before and after the training programs.  
  iv. Record of training sessions and notes on interactions that occurred during the activities.  
  v. Action plans and other products generated during the training program.  
  vi. Record of discussions during community meetings. |
| E. ...change their perceptions about the national park because they view it as a potential economic benefit to the community? | E.  
  i. Participants referred to the Park as a potential source for national and international ecotourism | E.  
  i. Transcripts of interviews with selected participants before and after the training program.  
  ii. Transcripts of focus groups that occurred before and after the training programs.  
  iii. Record of training sessions and notes on interactions that occurred during the activities.  
  iv. Record of discussions during community meetings |
| F. ...change their perceptions about the national park because they view it as a source of regional, national and historic pride? | F.  
  i. Participants expressed pride in being one of the few communities in El Salvador adjacent to a natural forest preserve and an important archaeological resource. | F.  
  i. Transcripts of interviews with selected participants before and after the training program.  
  ii. Transcripts of focus groups that occurred before and after the training programs.  
  iii. Record of training sessions and notes on interactions that occurred during the activities.  
  iv. Record of discussions during community meetings. |
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<tr>
<td>II. Better community organization that facilitates collective action toward the resolution of specific community problems:</td>
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<td>As a result of the training did participants...</td>
<td>A. i. Participants attended and actively participated in community meetings with SalvaNatura staff. ii. Participants consulted individually or in small groups with National Park representatives about management issues. iii. Participants motivated other community members to take an interest in Park management. iv. Participants indicated an action they would do directly related to Park management. B. i. Participants attended and actively participated in community meetings with SalvaNatura staff. ii. SalvaNatura adjusted the management plan, park boundaries or took other measures to accommodate community priorities. iii. Other institutions (e.g. Ministry of Education) took measures to accommodate participant priorities. iv. SalvaNatura administrators or other institutional representatives verbally committed to resolving a community issue raised by participants.</td>
<td>A. i. Observation of participants' activities during or shortly after the training. ii. Transcripts of interviews with selected participants before and after the training program. iii. Transcripts of focus groups that occurred before and after the training programs. iv. Record of training sessions and notes on interactions that occurred during the activities. v. Action plans and other products generated during the training program. vi. Record of discussions during community meetings.</td>
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B. ...participants' priorities or demands gain recognition and legitimization from SalvaNatura and other institutions? | |

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<td><strong>C</strong> ...facilitate greater access to the resources (e.g. credit, education, skills) that their communities sought?</td>
<td>C. i. Participants approached the municipality or other government institution with a plan or a proposal for making a specific resource available to the community. ii. Participants sought the advice of a SalvaNatura administrator or other local official with regard to the process for acquiring assistance or technical expertise for a specific problem in their community.</td>
<td>C. i. Observation of participants’ activities during or shortly after the training. ii. Transcripts of interviews with selected participants before and after the training program. iii. Transcripts of focus groups that occurred before and after the training programs. iv. Record of training sessions and notes on interactions that occurred during the activities. v. Action plans and other products generated during the training program. vi. Record of discussions during community meetings.</td>
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<tr>
<td><strong>D</strong> ...develop leverage to collectively obtain more resources then they could ever obtain individually?</td>
<td>D. i. Participants organized a community (or stakeholder) meeting to raise an issue and plan collective action to resolve it. ii. Participants organized representatives from numerous communities to develop an integrated development plan, then presented it to the municipality and SalvaNatura. iii. Participants expressed an action that they would take with the goal of increasing community leverage.</td>
<td>D. i. Observation of participants’ activities during or shortly after the training. ii. Transcripts of interviews with selected participants before and after the training program. iii. Transcripts of focus groups that occurred before and after the training programs. iv. Record of training sessions and notes on interactions that occurred during the activities. v. Action plans and other products generated during the training program. vi. Record of discussions during community meetings.</td>
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<td>III. Increased level of individual or collective critical consciousness.</td>
<td>A. Participants referred to themselves as subjects with human dignity who are able to act upon their world.</td>
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<td>As a result of the training did participants....</td>
<td>A. i. Observation of participants’ activities during or shortly after the training.</td>
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<td>A. ii. Transcripts of interviews with selected participants before and after the training program.</td>
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<td>A. v. Action plans and other products generated during the training program.</td>
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<td>A. vi. Record of discussions during community meetings.</td>
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<td>A. ...gain an improved self-image, increased esteem, and a more positive self-identity?</td>
<td>B. i. Participants defined community problems in terms of the macro-socio-economic context.</td>
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<td>B. ii. Participants identified the contradictions between institutional rhetoric and the reality in their own community.</td>
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<td></td>
<td>B. iii. Participants proposed solutions that accounted for the systemic, root causes of a problem.</td>
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<td>B. iv. Participants expressed comments and ideas which demonstrated their capacity to problematize an issue.</td>
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<td>B. ...deepen their understanding of how the “system” works and define their relationship to their world?</td>
<td>B. i. Observation of participants’ activities during or shortly after the training.</td>
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<td>B. ii. Transcripts of interviews with selected participants before and after the training program.</td>
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<td>C. ...develop or improve their capacity to critically reflect?</td>
<td>C. i. Participants challenged SalvaNatura's biodiversity protection goals compared to their own community development goals. ii. Participants challenged the government experts based on their own investigation. iii. Participants analyzed their accessibility to the market to sell their crops compared with the large landowner. iv. Participants questioned the limited education and employment opportunities for youth in the community.</td>
<td>C. i. Observation of participants' activities during or shortly after the training. ii. Transcripts of interviews with selected participants before and after the training program. iii. Transcripts of focus groups that occurred before and after the training programs. iv. Record of training sessions and notes on interactions that occurred during the activities. v. Action plans and other products generated during the training program. vi. Record of discussions during community meetings.</td>
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<tr>
<td>D. ...develop a more positive and innovative perception of their relationship to their world?</td>
<td>D. i. Participants referred to themselves as subjects who have power to obtain resources or introduce changes. ii. Participants encouraged others to join them in acting to improve their situation. iii. Participants conveyed a hopeful attitude about the power of the community to create a better future.</td>
<td>D. i. Observation of participants' activities during or shortly after the training. ii. Transcripts of interviews with selected participants before and after the training program. iii. Transcripts of focus groups that occurred before and after the training programs. iv. Record of training sessions and notes on interactions that occurred during the activities. v. Action plans and other products generated during the training program. vi. Record of discussions during community meetings.</td>
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| E. ...become more concerned with the long term welfare of the community rather than immediate, personal gratification? | E. i. Participants overlooked the short term benefits of SalvaNatura's reforestation program and questioned its long term goals.  
ii. Participants prioritized getting certification for a secondary school over other short term income generation projects.  
iii. Participants collectively generated a year long development plan for their community. | E.  
i. Observation of participants' activities during or shortly after the training.  
ii. Transcripts of interviews with selected participants before and after the training program.  
iii. Transcripts of focus groups that occurred before and after the training programs.  
iv. Record of training sessions and notes on interactions that occurred during the activities.  
v. Action plans and other products generated during the training program.  
vi. Record of discussions during community meetings. |
CHAPTER VI

RESULTS OF THE STUDY

Introduction

The amount of information I collected throughout and immediately following the three different workshops is overwhelming. I have limited this chapter to revealing the recurring themes which gave rise to the assessment framework. It would be possible for me to extend the discussion of the project data into several layers of detail and analysis. In a way, each source of data provided a unique perspective that could serve to generate alternative analysis and conclusions. However, such an in-depth presentation of the data is beyond the scope of this study and would probably distract from the broader more significant results. Patton suggests, that too much description “...becomes trivial and mundane” (1990, p. 430). This chapter illustrates and elaborates upon each of the indicators presented in the assessment framework.

Because the training process and post-training interaction was designed to be highly responsive, it generated both collective and individualized accounts of the participants’ experiences. The accumulated data garnered from three different training interventions proved to complicate the process of presenting the findings. In order to maintain some kind of comprehensible flow, the presentation of the findings for all three training interventions are joined together and organized according to the assessment framework presented in the previous chapter. As presented, my interaction with the
participants and the outcomes of the training seem much more coherent than the actual experience.

When reviewing my data, I have generally relied upon a participant’s communication style or word choice to initially differentiate whether a person was expressing an intended action that was: 1) more concrete, affecting his/her environment; or 2) more abstract, reflecting an internal transformation the person may have experienced. Several statements remained ambiguous or contained both external and internal elements. These were often included in several different categories simultaneously.

For example, one participant said, “...we must continue to monitor the river, we cannot trust the people from ANDA [State Water Agency] to maintain our water supply.” This statement represents an intention that includes an external aspect, to monitor the river, and an internal aspect, mistrust of the government’s water distribution system. Such a statement was placed in all three themes for consideration. Then, upon secondary review, I was able to identify the redundant themes and reduce the total number of categories. In most cases, I was able to correlate the multi-layered statements to a single category. However, numerous especially powerful statements remained in several categories.

For the demonstrative purposes of this chapter, verbatim transcript data were combined and generalized in order to present important themes in a coherent manner. The following account is a combination of training experiences and products generated during
all three training programs, critical reflections on those experiences and expressed intentions for future actions.

Direct quotes were taken from interview transcriptions which were translated from Spanish to English. Direct quotes are indented and single-spaced throughout the chapter. All names and other identifying factors have been changed in order to ensure confidentiality. Assessment areas and indicators form the framework are included to organize the information and orient the reader.

**Presentation of Assessment Findings**

I. Environmental, Health and Economic Benefits to the Community

Question I.A.
As a result of the training on watershed monitoring and protection, did the participants change their behavior or perform an action that directly affects the quality of the environment or their household’s access to agricultural or natural resources?

The vast majority of the data acquired for this study, focused on short term qualitative impacts. The purpose of the watershed monitoring training was to engage participants in an inquiry of their watershed and their community’s relationship to it. Therefore, the majority of actual changes in behavior or the adoption of conservation practices resulting from the training would happen in the long run. However, I did observe some actions which participants attributed directly to the training program. In one case, a participant actually sought me out to show me rows of the drought resistant, soil-holding *Izote* (*Agave* sp.) he planted on his hillside.
Indicator:
i. Participants adopt a specific action which protects soil, water, air or other natural resource.

Following the training, three participants dug contour ditches on their milpa to reduce loss of their valuable topsoil. They each claimed that participating in the training motivated them to take part in SalvaNatura’s reforestation program. SalvaNatura’s reforestation consisted of motivating farmers to create barriers to erosion by rewarding them with several forest and fruit tree seedlings. When the reforestation program began, most farmers were hesitant to “buy into” it because they saw little benefit for themselves and did not trust SalvaNatura. As a result of the watershed training the participants realized the significant amount of soil they were losing every year. More importantly, they had a better understanding of SalvaNatura and the purpose for the protected area.

One of the youths who participated in the training changed his habit of dumping the household trash directly into the Rio San Francisco. Prior to the training, the youth showed how he would walk ten meters from his home and hurl the plastic bag of trash into the swiftest current. He claimed that by participating in the water quality monitoring, he realized how his actions directly affected the quality of the river. Now he walks almost a kilometer to the designated landfill.

Indicator
ii. Participants establish a system for monitoring changes in the environment.

Subsequent to the training, the following organizations have established regular water quality monitoring activities: 1) the sixth grade class of San Francisco Menéndez;
2) the community of Tamasha; 3) the sixth grade class of Cara Sucia; 4) the three park guard outposts in El Imposible national Park.

Volunteer groups for each of the participating organizations completed monthly monitoring activities in designated sites along the San Francisco River or its tributaries. The data from each of the sites were being accumulated and tabulated by SalvaNatura and the sixth grade class of San Francisco Menéndez. The tabulated information was made available to the public and will form the basis of an interpretive display on watersheds. The participants and the management agencies agreed to use the data to form a baseline, so that stakeholders could record changes in the quality of the river and the riparian zone over time. The following individuals and groups had been identified as local stakeholders: small farmers who irrigate, families that bathe and wash their clothes in the river, caserios, water supply groups, ADESCOs, cooperatives, SalvaNatura, NGOs, the Environmental Division, the Ministry of Health and other agencies.

The intent of the participatory monitoring activities was to assist stakeholders in identifying problem areas in the watershed and provide them with information for prioritizing actions. Participants envisioned the monitoring process to eventually be coordinated by the soon to be established San Francisco Menéndez-Cara Sucia Watershed Council.
Indicator

iii. Participants establish a community “ecology club” or other environmental education program. Participants plan and implement an event to share their knowledge about environmental protection.

Two of the teachers participating in the training had already established nominal ecology clubs in their schools, San Francisco Menéndez and Cara Sucia. As a result of the training the educators revitalized the clubs and duplicated much of the content of the watershed training course with their students. The clubs assumed the brunt of the monitoring activities for their respective schools.

Also, after the training, one of the park guards worked with youths from the community to involve them in the national park’s water monitoring activities. He hoped that by engaging them in park management activities the youths would develop an appreciation for the environment. He felt that this could be the first step toward forming a youth operated, self-sustaining cooperative of nature guides available for future park visitors.

Several of the final action plans completed during the watershed training proposed different strategies and designs for environmental education campaigns. The purpose of the campaigns was to illuminate residents’ relationship to their watershed. Several participants also indicated that they planned to utilize the monitoring activities as an educational strategy to motivate community members to investigate their own environment. In addition, the participants agreed to collectively prepare and present the participatory watershed monitoring methodology that they developed during the course of
the training to the general public during *El Dia de la Tierra* (Earth day) the following April.

Indicator iv. During or after the training the participants propose an action that they will do to protect or improve the quality of the environment.

During the training the participants actively investigated their watershed by collecting information about the river and the human activities near the river. They then completed a participatory analysis of their collective data and prioritized a list of problem areas. Participants generated Action Plans in the final session of the watershed monitoring training. They worked in teams to answer the question, “What do you want to do now?” In order to promote collaboration among the different interests participating in the training, many participants formed teams of two or three people. To maximize the probability that the projects would actually be carried out, participants were encouraged to select practical projects that fell within their job responsibilities or their perceived role within the community. All of the Action Plans implied some impact on maintaining or improving the quality of the environment; several also focused on building the capacity of the community to resolve environmental issues. The plans are summarized here and will be referred to in other parts of this analysis.

**List of Action Plans**

1. **Title:** Community-Based Water Quality Monitoring System for the San Francisco Watershed

   **Participants:** (5) Regional head of extension, Superintendent of El Imposible national Park, Park guard supervisor in San Francisco Menéndez, School teacher from San Francisco Menéndez, School teacher from Cara Sucia
**Description:** Participants will create a system for collecting, organizing, analyzing and displaying the water quality monitoring data obtained by each organization participating in the monitoring program. A contact person from each of the participating organizations (S.F. Menéndez school, Cara Sucia school, the community of Tamasha, Conacastes school, *El Imposible* National Park and the regional extension service) will be identified. The superintendent of *El Imposible* will be responsible for collecting the water quality data from each of the organizations. The participants will organize and analyze the data and distribute it to each of the participating organizations. The information will also be displayed in an interpretive exhibit on watersheds within *El Imposible* National Park.

2. **Title:** Creation of an Ecological Group

**Participants:** (4) Two students and two teachers from the town of San Francisco Menéndez

**Description:** This project consists of establishing an ecological group for the purpose of investigating and informing the community about environmental issues. This group will be based in the school. The group will be responsible for carrying out monthly watershed monitoring activities and organizing the data in a way that is comprehensible and useful to local residents.

3. **Title:** River Clean-up Campaign

**Participants:** (3) Park guard from San Francisco Menéndez, Teacher from Tamasha, and Small farmer from Tasmasha.
Description: This project consists of an organized, one-day effort to collect trash within and along the shore of the San Francisco River. The project is organized into three phases: a) Designing and preparing materials to inform and encourage residents to participate; b) Informing residents and garnering support and participation; c) Organizing and implementing the day long clean-up effort.

4. Title: Soil Conservation Demonstration

Participants: (4) Extension agent from the Green Project, School teacher and two students

Description: The participants will organize an investigation of erosion on a slight slope behind the school grounds. The demonstration will consist of three 10m x 5m plots: a) bare ground; b) remains of last years corn and bean plants; c) forested area. Each plot will be isolated using a tin barrier inserted at least 20cm deep. The runoff will be channeled into barrels buried at the base of each plot. The amount of soil runoff from each plot will be weighed and compared. The investigation team will clearly graph the results. They will then organize an event to display their results to area farmers.

5. Title: River Field Day

Participants: (5) Two school teachers from Conacastes, One school teacher from Tamasha, Small farmer from Tamasha, and Park guard from S.F. Menéndez

Description: The participants will organize a water quality monitoring day for the community of Tamasha. They will motivate locals to attend by inviting families to join a school sponsored field trip to a pristine part of the river within the protected
area. The participants will facilitate a community investigation into water quality upstream, within the protected area. Another group will monitor the water quality downstream, below the community. The participants will facilitate a discussion of the disparity of the water quality, which should lead to a discussion and inquiry into the sources of contamination between the upstream and downstream sample.

Following the watershed training the participants indicated many actions they intended to take that would protect or improve the environmental quality of the watershed. Edwin, a fifteen year old youth who participated in the training as a student, captured the essence of many people’s statements when he said:

...we always knew that the river water below town was dirtier that the water in El Imposible. But now we know just how much dirtier and we can pinpoint who the polluters are. Instead of simply saying people pollute, we can look at the difference in insect life and water clarity above and below the Guevara farm, and say you are making the water this much dirtier because you leave no vegetation on your parcela and your topsoil is eroding away. Once Mauricio realizes how much topsoil he’s losing, it’s easy to convince him to leave some vegetation and plant Izote barriers.

Question I. B.
As a result of the training on watershed monitoring and protection did the participants change their perceptions about the environment, conservation and/or the concept of a national park as a conservation entity?

Indicator
i. Participants visit the park voluntarily solely for recreation or appreciation of its natural beauty.

Unlike other communities in the region, in San Francisco Menéndez locals always had easy access to El Imposible. On Sunday afternoons it was common to see families
walking few kilometers into the protected area for a picnic on one of the rivers’ many sun
drenched boulders. It is impossible to ascertain the extent to which participants were
seeking out natural areas due to a greater appreciation for the environment which they
gained as a result of the training. However, there are at least three instances where
participants indicated visiting the national park because of interest or issues arising from
the training program.

In one instance a participant was motivated to seek a pristine portion of the river
to examine aquatic insects. One part of the water monitoring exercise covered during the
training consisted of examining aquatic insects as biological indicators of overall water
quality. On his own time, the participant went to the protected area to become more
familiar with the insect diversity found in clean water. In the other instance, two
participants dedicated several days to surveying potential water sources for the town of
San Francisco Menéndez within the park boundaries.

Indicator

ii. Participants refer to the Park as a sustainable source for water, trees, air or some other
natural resource.

iii. Participants recognize potable water, fuelwood, or soil as a limited resource that must
be sustained.

From the PRA data compiled in 1996 for the production of the park management
plan, combined with my own observations and interactions, it was clear that the majority
of the people living in Ahuachapán, and other outlying areas influenced by El Imposible,
were unsure of the national park concept. The idea of a large parcel of land belonging to
all Salvadorans in perpetuity challenged the traditional, single landowner paradigm. From
the perspective of a subsistence farmer, any parcel of land that was not put into production
either belonged to a large coffee producer (single landowner or cooperative) or was too inaccessible to be of any value. For the most part, farmers had a profound sense of the ecological components necessary for healthy crops. But for many of the socioeconomic reasons outlined in Chapter III, most farmers were forced to adopt practices that maximized short term gains, often times at the expense of long term soil fertility.

Individual farmers working the land adjacent to the protected area understood that their water supply was inextricably linked to the forested area above them. Jesus, a 22 year old who began cultivating his parcel of sloping land six years ago, explains:

My soil, my water, my lea (fuelwood) all come from the forest above. But every year I am harvesting less corn and beans from my milpa and getting fewer and fewer colones for my harvest. I have no choice but to clear a little more forest so my family can eat.

The local farmers’ perception of SalvaNatura was that of an elitist organization attempting to take over their land. Prior to the training programs, most participants from Tacuba believed that SalvaNatura’s sole mission was to aggressively acquire land for the “...San Salvadoran based business interests it represents”. An older farmer, Salvador, from the village of El Sincuyo, told me:

SalvaNatura has been buying up the mountain for the last three years. They only care about trees and animals and don’t understand that we have to live. I’m afraid that they’ll take over my land and force me to plant trees. They only want the forest so they can bottle the water and sell it to the rich people in San Salvador.

A common outcome to all of the training programs was that participants gained a better idea of the concept of a national park and SalvaNatura’s role as a management agency. By the end of the training, it was clear that all of the participants realized that at
least some of the goals of protected area management overlapped with the small farmers' goals of maintaining healthy soil and a year round water supply.

Farmers in the region always had a clear concept of the components of a healthy agroecosystem and knew the benefits of forested areas in protecting soil and water resources. Although, participating in the training programs may not have augmented their existing knowledge about the role of forests in protecting the watershed and sustaining their farming livelihood, it did enable them to consider a protected area as a potential benefit.

Question 1.C.
As a result of the training did participants change behavior or perform an action that directly affects the health of their household?

Indicator
i. Participants adopt a specific practice which improves their household's or their community's health.
ii. Participants design and implement an event that enables them to share their knowledge about preventing the spread of waterborne diseases.
iii. During or after the training the participants express an action that they will do related to preventing the spread of waterborne diseases.

Early in the watershed training, the participants reviewed salient Salvadoran national health statistics provided by the World Health Organization. The two statistics that generated the greatest discussion among the participants were: 1) More than 80% of the hospital visits made by children under the age of five were due to intestinal parasites; 2) 20% of the deaths of children between the ages of one and five were attributable to intestinal parasites.

This activity led to an informal inquiry of the participants own potable water source, domestic use and wastewater flow. While participants living in the town of San
Francisco Menéndez were less sure of the source and outflow of their water supply, participants from the more rural communities knew exactly where their water came from, how much they used and exactly where the waste water flowed. A school teacher living in San Francisco Menéndez knew the location of the town’s water storage tank, but was unsure of the source of water. Below are my reproductions of maps of household water use completed by a 16 year old student from the rural village of Tamasha and by a 26 year old school teacher from San Francisco Menéndez.²

Figure 4. Map of household water supply, San Francisco Menéndez, El Salvador.

²Participants drew their original maps on a worksheet that they kept with them in their field manuals. I reproduced a few representative samples in my fieldnotes.
Figure 5. Map of household water supply, San Francisco Menéndez, El Salvador.

The exercise “mapping your domestic use of water” brought to light the fact that not every household in the region had a latrine, and some existing latrines were too close to the river or well. Prior to the training the participants were aware of the relationship of human feces to waterborne diseases but did not consider household latrines a priority. Participants without latrines understood, at least superficially, that they were important to protect their family’s health, but did not construct them because of the perceived limitations of their circumstances. Manuel, a 30 year old farmer from the community of El Refugio, told me:

I am originally from Morazan, I lost everything during the conflict. I came here, like everyone else in El Refugio, because the government promised me land and a house...They gave us barely enough blocks and zinc to build these small houses. They gave us no materials for latrines or any PVC tubes to build a system of running water. Our first problem is getting a supply of water, then we can worry about latrines.
After completing a flow diagram of their own household's water use, then a visual analysis of the potential sources of contamination within their community and their watershed, the participants were motivated to act. Suddenly, the link between latrines and preventative health became a burning issue. Manuel and two of his colleagues designed an action plan to bring latrines into El Refugio.

Manuel was from the Tacuba side of El Imposible. During the training he learned about the rural development activities the Green Project was already sponsoring in the San Francisco Menéndez watershed. Specifically, he learned that the Green Project was supplying materials for the construction of latrines for communities within the San Francisco watershed. For his action plan, he proposed a participatory planning process for determining which households needed latrines in El Refugio. He believed that if the community could show a unified plan and demonstrate that the households involved were willing to do all the labor, the Green Project, SalvaNatura or another stakeholder organization would donate the materials.

Question D.
As a result of the training did participants adopt a practice or take some action that directly affects their household income?

From the outset, SalvaNatura administrators and other organizations involved in the production of El Imposible's management plan envisioned the protected area to be a great economic benefit to the region because of the tourism it would draw. Park supporters touted the economic potential associated with El Imposible at the national, regional and local level. Early in the process for developing the management plan, SalvaNatura representatives organized community meetings in San Francisco Menéndez,
Tacuba and other towns and warned community leaders and interested residents to brace themselves for an economic boom. They pleaded with residents to prepare themselves for the onslaught of visitors, once El Imposible officially opens. Locals were told that in other Central American communities outside developers capitalized on the economic windfall of tourism and local residents were forced to move away or compete for low paying service jobs. Several subprograms in El Imposible’s final management plan are dedicated to building local capacity to manage ecotourism, including providing training in microenterprise development for artisans, restauranteurs and innkeepers.

By the time I arrived and began working with the locals there was already high expectations that some form of economic benefit would accompany the opening of El Imposible. Although I spent three months building a rapport with the communities and clarifying my role as an independent researcher separate from SalvaNatura or any other donor organization, it’s clear that most of the people joining the training programs expected some form of economic benefit to justify their effort. This became obvious in a conversation I had with Lucas, one of the Association leaders from the village of El Rosario, while I was trying to enlist his participation in the Liaison Committee training:

Lucas: ....so you are saying that SalvaNatura is going to regulate what happens in El Imposible, with or without our participation or advice.

Me: Yes. I’m sure that they will hold public meetings, as they did for the management plan, but usually in those kind of meetings SalvaNatura is informing you about what they are going to do with or without your input. If we get all the ADESCO leaders together, and form this “Liaison Committee” then the communities will be more organized. Your requests and suggestions will be much more powerful because you will have a unified voice. SalvaNatura and all the government organizations would
know that they’re not just dealing with an individual but an organized group speaking for all the communities.

Lucas: ...do you think if we asked them [SalvaNatura] to pave the road they would do it?

Me: ...I don’t know, I wouldn’t expect miracles. But if all the communities, (El Rosario, Santa Teresa, El Jicaro, El Sincuyo) got together and made a proposal ... you know a proposal is an organized way of saying why you need a paved road and a plan for making it happen ... you could get SalvaNatura to support a request to MOP (Ministry of Public Works). And because El Imposible is of national interest, you just might get your paved road. That’s only an example, but you see what I mean when I say a “Liaison Committee” will make you more powerful....

Lucas: What about the money from tourism Juan Marco [Executive Director of SalvaNatura] said we’d get? Don Jesus makes drums and flutes, he was motivated when he heard that he could sell his instruments to the tourists.

Me: That’s just the kind of thing you could organize through the committee. Maybe the committee could request some kind of start-up assistance for the artisans...

This situation simply reinforced the nonformal education precept that adults are motivated to participate in a voluntary training program only if they perceive that the activity will fulfill their immediate needs and aspirations (Smith, 1983; Rogers, 1986; Rogers, 1989). As a trainer, I had to deal with many issues before implementing the three training programs. With each potential participant I had to answer the questions, “Why are you attending this training? What is your personal reason for coming?” For the most part, it was a combination of curiosity and the perception that it could lead to opportunities for themselves or their community. In almost every case, the “opportunities” included some form of economic benefit.
Indicators

i. Participants adopt a specific practice primarily to augment household income.

ii. Participants design and implement a community event to promote a microenterprise activity (such as sale of local handicrafts).

iii. During or after the training the participants express an action that they are interested in pursuing because of its income generation potential.

During both the Organization training and the Liaison Committee training participants identified the creation of more income generating opportunities as a priority for their communities. In the Organization training, the Development Association of San Francisco Menéndez produced a year long operational plan and a longer term vision. Early in the process, the participants identified unemployment as a key issue. Their operational plan proposed a number of events to foster alternative income generation in their community. Much of the plan was based on the assumption that the opening of El Imposible will bring an influx of tourism to San Francisco Menéndez. The one year plan included working with SalvaNatura to develop a workshop for community artisans on small business management. Another project entailed training interested youth to be naturalist guides for the park. Upon completion of the training, the youth would form a cooperative and offer their services for a set fee to park visitors. Another part of the plan proposed a series of entrepreneur trainings for potential food service providers.

Question E.
As a result of the training did the participants change their perceptions about the potential economic benefits to themselves or their community associated with the park?

Indicator

i. Participants refer to the Park as a potential source for national and international ecotourism.
Several exchanges occurred during the Organization training and the LC training which demonstrated a gradual shift from viewing El Imposible as a limitation to a potential economic benefit.

An incident that occurred during the Organization training demonstrates this transition. This exchange took place while the participants were generating potential solutions to problems. Julio who is in his fifties, is the acting president of the Development Association and has a government job in the larger town of Cara Sucia. Guadalupe is a 23 year old woman who is a member of the Development Association and works for SalvaNatura as the only woman park guard. Mario is an unemployed youth who spends his evenings hanging around the center of town.

Julio: ...we are the only town along a decent road that offers access to El Imposible. Of course visitors will come through town when the park finally opens. The question is what will they bring besides drugs and crime.

Lupe: The question is, “why would they stop here?” The only restaurants, or even comodores [private homes that sell plates of food] are way over in Sonsonate [small city on the way to San Salvador]. They’ll drive right through San Francisco, park their cars, visit the park, then drive right back home. People will stop in Sonsonate for dinner on their way back to San Salvador.

Mario: That’s why we have to open a decent restaurant here in town.

Julio: We don’t need visitors, they’ll just bring problems.

Mario: Listen, people that visit national parks aren’t from gangs, they’re not involved in drugs and crimes. And if we don’t do something to take advantage of tourism in our town we’ll lose all the benefits to Sonsonate or some businessman from El Salvador.

By the end of the session the small group developed a strong argument for the Development Association to actively plan for the influx of the anticipated tourism that
should accompany the park opening. Mario and Guadalupe had convinced Julio to consider the national park as a potential asset rather than a source for crime and drugs.

Question F.
As a result of the training did participants change their perceptions about the national park in terms of its purported role as a center of regional, national and historic pride.

Indicator
i. Participants expressed satisfaction or pride for living in one of the few Salvadoran communities that has preserved a natural forest and an important archaeological resource.

A powerful intergenerational interaction occurred during the Organization training with the Development Association of San Francisco Menéndez. The participants were attempting to prioritize projects for a one year operational plan. One of the younger participants was advocating for the elimination of a proposal to create a Casa de la Cultura (House of Culture) in town. He didn’t feel that the Association should waste time and money on a museum. He was immediately rebuffed by the oldest participant, who launched into a very sincere and detailed account of the town’s history. He captivated the other participants with stories about the way of life many years ago. The most powerful moment came when he spoke about the traditional indigenous dress that predominated in town two decades ago. He spoke about the archaeological sites that locals knew about within El Imposible. He spoke about people traveling from Tacuba on the old road and the difficulty they encountered trying to get over the rocky pass, locally known as the “impossible pass”, or paso el imposible, the namesake of the entire protected area.

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3 Casa de la Cultura is a government designation that usually includes funding for a historian or anthropologist to establish a small town museum and provide research and education about historical and cultural issues for the community.
As a result of this passionate reminiscence not only did the other participants agree that the Casa de la Cultura should be a priority, but that there should be more opportunities for intergenerational communication.

A post training interview, with Edgardo indicates a changed perception about the value of El Imposible as a national treasure. Edgardo is a small farmer, who prior to the training, considered El Imposible to be just another large landholding. He participated in the Water training. During the post training interview he expressed his amusement at interacting with the school teachers from Cara Sucia.

...they [the school teachers from Cara Sucia] were amazed at how many trees we have around here. They couldn’t stop talking about the forest in El Imposible. I never realized how fortunate we are to live here at the base of the mountains. The training made me believe that El Imposible is truly a magnificent treasure.

Theme II. Better community organization that facilitates collective action toward the resolution of specific community problems.

By the time I began the training programs, SalvaNatura had already initiated several programs trying to garner community input and support for the park management plan. In fact, SalvaNatura supported this study primarily to strengthen its community outreach program. The LC training actually emerged from an objective that was in the management plan. The plan called for the creation of a Liaison Committee to represent the diverse interests of the villages surrounding the protected area. The LC training simply was a catalyst for fulfilling this objective. The training brought the potential committee members together to collectively identify their needs and define a working
relationship with SalvaNatura. Similarly, the Organization training in San Francisco Menéndez strove to enable the existing Development Association to be more proactive in generating community projects and participating in the park management.

The reader should be aware of the larger context surrounding the implementation of the training programs. At the time of the training interventions, SalvaNatura was actively seeking greater community input. Although specific mechanisms for horizontal communication between the communities and SalvaNatura were not completely in place, SalvaNatura was open to this kind of feedback. This predisposition, combined with the timing of the training interventions, created conditions that facilitated the participant’s ability to organize within their community, and participate in the management of the protected area.

Another factor which influenced the participants’ capacity to organize and garner support for their ideas following the training programs, depended upon their community’s previous exposure to rural development projects. The San Francisco Menéndez watershed, or all the communities on the southern side of El Imposible, were the focus of a USAID led integrated conservation project. Tacuba and all the communities that bordered El Imposible to the north did not benefit and had no contact with the USAID project. The Water and the Organization training programs took place in San Francisco Menéndez with participants that either benefitted directly or were very familiar with the USAID development project. The LC training took place on the Tacuba side of the protected area with participants who knew little or nothing about the USAID project.
In general, the participants on the San Francisco side of the protected area are a little more passive about organizing and community action. This distinction is partially revealed by comments, expressions and outcomes noted in the categories below.

Question A.
As a result of the training did participants participate more in the management of the protected area.

In all three trainings the participants took actions that in some way augmented their participation and influence over the management of the protected area. As a result of the Water Training, the participants were able to approach SalvaNatura land managers with a specific request for access to water sources within the park boundaries. In the Organization Training, the participants outlined specific ways in which they would interact with SalvaNatura in order to ensure that the economic benefits of tourism generated by El Imposible remained within their town. Similarly, as a result of the LC Training, the participants in Tacuba formalized a system for communicating local priorities to SalvaNatura and participating in land management decisions that directly affected adjacent communities.

Indicator
i. Participants attend and actively participate in community meetings with SalvaNatura staff.

Toward the end of the Organization Training, the participants invited the Chief Manager of El Imposible to attend the presentation of their development plan. They presented their year long plan and emphasized the areas that would require collaboration with SalvaNatura. The park manager politely listened, thanked them for their genuine
interest in the protected area and assured the participants that some form of collaboration would result from their plan. At the conclusion of the meeting the park manager agreed to investigate the feasibility of the proposed projects and, with the participants, scheduled another meeting the following month.

In a private conversation, immediately following the meeting, the Chief Park Manager expressed his amazement at the level of directiveness the participants exhibited during the meeting. He was more accustomed to the passive mood that pervaded his prior interactions with the Development Association. In past meetings, he or another project manager set the agenda and led the discussion. He admitted that as a result of this latest encounter with the Development Association, he realized that the focus of prior meetings was on transmitting information about the park to the Association as opposed to a horizontal discussion about park management.

ii. Participants consulted individually or in small groups with National Park representatives about management issues.

The training programs catalyzed abundant formal and informal discussions with SalvaNatura staff. In several cases, the training programs stimulated greater interest in management issues, because the programs provided a time and a place for local residents to reflect directly upon the implications of the establishment of a national park near their communities.

The interactions ranged from personal discussions between local residents and park guards, to organized requests on the part of community groups for meetings with SalvaNatura administrators. The discussions between park guards and local residents are
and local residents. Activities such as harvesting fuelwood, collecting fruits or wild orchids and even entry into the park without a permit, were clearly prohibited according to the protected area regulations decreed by the national legislature. Yet, over the years an informal relationship evolved between the local residents and the park guards charged with enforcing park rules. But this relationship varied somewhat depending upon who was doing what, where and when? For example, locals understandably were granted free access to and from the park. Among other things, the principle walking route between the municipalities of San Francisco Menéndez and Tacuba lay within the park boundary. The park guards, who carried out patrols all hours of the day, were then charged with the task of deciding whether or not an individual was local and whether or not they had a legitimate right to be in the park. This situation begged the question "... who was local?". Some guards interpreted it as being only people who lived in communities adjacent to the protected area. Others included anyone living in the region of Ahuachapán. As a result of the LC training, the park administration agreed to a meeting with community leaders to review and clarify the access policy for local residents.

Another issue that was left primarily to the discretion of the local park guards was access to fuelwood. Nearly every rural household in the communities surrounding El Imposible depended on fuelwood for cooking. Due to the drastic deforestation surrounding the park, in some communities women and children were forced to travel as far as six kilometers up the mountain in order to collect a minimum supply of low quality fuelwood. Prior to the regular park guard patrols, locals would often harvest dead and dying branches form the secondary growth understory within the park boundary. This
dying branches form the secondary growth understory within the park boundary. This practice changed under SalvaNatura’s management. Although there was an informal, tacit acceptance of a limited harvest of dead and downed wood by locals near the park boundary, again enforcement was left to the discretion of the park guards.

As a result of the Organization training in San Francisco Menéndez, the Development Association proposed developing community operated, fuelwood nursery on park land near the town. The idea was well received by the Chief Park Manager, and paralleled several objectives in the park’s management plan. The Development Association created a nursery committee consisting of interested citizens and park guards to implement the idea.

iii. Participants motivated other community members to take an interest in Park management.
iv. Participants indicated an action they would take directly related to Park management.

In each of the training programs, the participants completed or proposed actions that directly involved them in some aspect of protected area management. A clear example of this was the Water training in which the participants established the long term monitoring system described earlier. Several of the training participants later applied the same collective inquiry process toward the negotiation of water rights within the park.

Future access to clean water was a principle concern for the village of Conacaste, immediately downstream from San Francisco Menéndez. Rather than simply approach the Park administration and demand access to water within the protected area, interested community members collectively investigated and planned their community’s future water need. They then approached the SalvaNatura administration with a draft plan of how
much water they needed, where they hoped to draw it from and the labor the community
was willing to contribute toward the project. The Water training participants that
contributed to this plan, not only took an active management role, but they also motivated
others to participate.

Question
B. As a result of the training did participants’ priorities or demands, gain recognition and
legitimization from SalvaNatura and other institutions?

Indicator
i. Participants attended and actively participated in community meetings with SalvaNatura
staff.
ii. SalvaNatura adjusted the management plan, park boundaries or implemented other
measures to accommodate community priorities.
iii. SalvaNatura administrator or other institutional representative verbally commits to
resolving a community issue raised by participants.
iv. Other institutions (e.g. Ministry of Education) take measures to accommodate
participant priorities.

The training programs served as a catalyst for the interaction between SalvaNatura
and the communities surrounding the national park. Although a substantial portion of the
management plan is devoted to community outreach and collaboration, in some cases the
depth and rate of the community participation was heavily dependent upon the training
interventions completed for this study. This was especially evident in the LC training in
Tacuba. By the time that I arrived in Tacuba, many of the community leaders had already
participated in one or two orientation or needs assessment meetings with the management
plan team. Despite these meetings, several substantive doubts and misconceptions
dominated the communities’ perceptions about the protected area. Residents were
hesitant to raise these questions in the earlier management plan meetings for any number
of reasons present at any gathering with perceived unequal power relationships.
During the LC training the participants’ misgivings and doubts about the protected area were aired during the first session. Upon the participants’ request, the protected area manager from SalvaNatura attended the following week’s session and addressed most of the concerns. Issues that were not resolved, such as the degree to which SalvaNatura would contribute to village infrastructure, formed the areas that the newly formed liaison committee would pursue.

Prior to the training the nature of the meetings with SalvaNatura were informational rather than participatory. SalvaNatura administrators presented their plans and projects and invited community members to comment. Following the LC training, committee members requested meetings with SalvaNatura administrators to comment on management practices and present community development priorities.

Following a meeting arranged by the Tacuba Liaison Committee members, this conversation I had with the protected area manager (PAM) demonstrates a potential policy shift on the part of SalvaNatura due to the LC training:

Me: ...did their requests [during the meeting] seem outrageous to you?

PAM: No, not at all. It’s more a matter of defining what our role is in the communities. I understand their concerns, and I sympathize with them completely. We can’t possible pay for a new road or electricity, but as I told them in the meeting we may be able to act as an intermediary, that is go with them to the Ministry of Public Works and argue why a better road should be a national priority. But the communities also need to understand their limitations and mission as an organization. By confronting many of these issues together with the Liaison Committee it will be a learning process for SalvaNatura and the communities ...

Question C. As a result of the training did participants facilitate greater access to the resources (e.g. credit, education, skills) that their communities sought?
Indicators
i. Participants approach the municipality and other government institutions with a plan or a proposal to making a specific resource available to the community.
ii. Participants sought the advice of a SalvaNatura administrator or other local officials about the process for acquiring a specific resource for their community.

During the production of the one year development plan by the Development Association of the town of San Francisco, two of the training participants pursued the desire to establish a secondary school in town with the Ministry of Education. The participants enlisted the support of the primary school principle and traveled to Cara Sucia to discuss the possibility with district superintendent. Although nothing was confirmed, by the time I left San Francisco Menéndez, the Development Association and the Superintendent were actively pursuing the project.

Question
D. As a result of the training did participants develop leverage to collectively obtain more resources than they could ever obtain individually?

Indicator
i. Participants organized a community (or stakeholder) meeting to raise an issue and plan collective action to resolve it.
ii. Participants organized representatives from numerous communities to develop an integrated development plan, then presented it to the municipality and SalvaNatura.
iii. Participants expressed an action that they would take with the goal of increasing community leverage.

The concept of leverage proved critical to every facet of this study, both for the training participants and SalvaNatura. In each of the training programs the participants shared a frustration with the status quo; many of these frustrations were aired during the focus groups that preceded the training programs. Built into the critical pedagogy training design was the assumption that the participants' collective bargaining strength could obtain the resources they need from a system that has traditionally ignored them. The
principle motivation for SalvaNatura to create and support *Comités de enlace*, or liaison committees, was to establish an effective and efficient system for communication with the communities surrounding the protected area.

In each of the trainings the participants knew intuitively that the path to recognition and resources from external agencies was through organizing. All the participants completed individual or group action plans for the purpose of motivating others to collectively inquire or act. For example, as a result of the water training, a few participants organized a community inquiry into the water needs of the village of Conacaste. They then used the data and, more importantly, the built up enthusiasm to petition SalvaNatura for water rights within El Imposible. Because it was an organized request from Conacaste with the support of surrounding villages, SalvaNatura administrators were compelled to seriously consider the issue. Similarly, the development plan completed by the Association of San Francisco consisted of an organized series of projects to address priority issues. The power of the plan was the inherent, concentrated community support which attended each of the projects.

On the Tacuba side of the protected area, the ambiguity around entry to the park and access to fuelwood frustrated numerous nearby households. Through the LC training, community leaders were able to leverage a meeting with park administrators to formalize an access policy for locals.
Theme
III. Increased level of individual or collective critical consciousness.

Question A.
As a result of the training did participants gain an improved self-image, increased esteem or a more positive self-identity?

Indicator
i. Participants referred to themselves as subjects with human dignity who are able to act upon their world.

In Tacuba, the majority of community leaders that participated in the LC training were men. One community leader, who lived about 12 kilometers from the meeting place in Tacuba, said that he could not commit to the weekly sessions, but would send his daughter, Maria, instead. Maria was about nineteen years old and spent most of her days caring for her younger siblings, maintaining the household, working in the field and picking coffee during the harvest season. From the first session it was clear that she felt out of place at the LC training. She was one of the only women attending and was very reluctant to even introduce herself at the first meeting. Several times she indicated that she was attending only at her father's request. I approached her before and after the first session and made it clear that her participation was completely voluntary. I offered to speak with her father to assure him that he would be part of the Liaison Committee, even if he was unable to attend the training. She considered this information, but insisted on attending the training.

During the second session, the participants aired their grievances about the park. An important issue that surfaced several times was the ambiguity surrounding access to fuelwood within the protected area. However, because women and children collect the
majority of the fuelwood, the community leaders were at a loss to pinpoint the location and circumstances encompassing the fuelwood disputes. Within her small group, Maria explained specific situations and locations where she or her neighbors were confronted by park guards. As a result of this experience, her level of participation and attitude toward the training gradually changed. She began to participate more in the larger group, and even challenged other male participants on particular issues. This personal transformation was clearly reflected in this excerpt from her interview following the training:

I learned a lot about myself during the training. I really didn’t want to participate and only came to please my father. I never talk in meetings, usually women aren’t even allowed to attend community meetings. Because my father is the president of our ADESCO [Development Association] I hear him say things at home. Sometimes, I discuss things with him at home, but never in a meeting. Because of this training, for the first time in my life, I feel like I have a lot to offer and other people, even ADESCO leaders from other communities, are willing to listen to me ...
administrators to consider community priorities. In a meeting organized by the community of Conacaste to present their proposal for water rights within the park, the community’s level of organization and candidness surprised some of the SalvaNatura and other agency representatives attending. In one particularly illustrative moment, a SalvaNatura representative exclaimed that tapping into a river or aquifer within El Imposible could not even be considered without knowing exactly how much water would be diverted and that a study of the environmental impact that such a diversion would cause was needed. The water project coordinator from Conacaste then proceeded then presented the study the community completed prior to the meeting. He showed exactly: a) how much water would be diverted; b) how many households would be involved; c) how much water would remain in the river; and d) why they felt it would have little or no impact on the natural environment.

During a meeting with SalvaNatura representatives in Tacuba, one of the LC training participants felt frustrated at the Project Manager’s reluctance to guarantee any part of SalvaNatura’s land acquisition program. In a powerful moment he confronted him with the question, “Can you promise me that SalvaNatura will never take over my or my children’s land?” Following the meeting the Project Manager exclaimed that he never encountered such candor and hostility in Tacuba before.

Question B.
As a result of the training did participants deepen their understanding of how the “system” works and define their relationship to their world?

Indicator
i. Participants defined community problems in terms of the macro-socio-economic context.
ii. Participants identified the contradictions between institutional rhetoric and the reality in their own community.

iii. Participants proposed solutions that accounted for the systemic, root causes of a problem.

iv. Participants’ comments and ideas demonstrated their capacity to problematize an issue.

Early in the Organization training in San Francisco Menéndez, participants engaged in the Problem Tree exercise in order to identify and prioritize community problems that the Development Association could plan to address. The participants worked in small groups to analyze problems that were identified in a previous activity. The participants wrote or selected a symbol to represent a problem identified in their community on top of a sheet of newsprint. They then analyzed the problem by asking why the problem situation exists in their community. As causes were identified they were diagramed on the newsprint as if they were roots to the problem. The problem trees were then used as discussion points rather than ends in themselves. Figures 6 and 7 show two of the problem trees prepared by the Organization training participants in San Francisco Menéndez.

The Problem Tree exercise enabled the participants to organize existing knowledge and collectively analyze the problems they shared. More importantly, the process itself served as a generative theme which allowed the participants to examine their own lives in relation to the larger political, socio-economic system.
Figure 6. Problem Tree prepared by the Organization Training participants in San Francisco Menéndez.

Figure 7. Problem Tree prepared by the Organization Training participants in San Francisco Menéndez.
Question C.
As a result of the training did participants develop or improve their capacity to critically reflect?

Indicator
i. Participants challenged SalvaNatura’s biodiversity protection goals compared to their own community development goals.

Each of the training programs raised issues which challenged SalvaNatura’s protected area management plan. There were numerous interactions before and immediately following the training programs that demonstrated individual participant’s capacity to critically analyze situations, issues and proposed ideas. This capability was made abundantly clear in the meeting in Tacuba (organized by participants) with SalvaNatura administrators. This short interaction between a small farmer, Julio, and a park administrator is indicative of what occurred that day.

Julio: How come we have to plant three forest trees for every one fruit tree? Why can’t we get more fruit trees?
Administrator: Because we don’t have that many fruit trees to give out.
Julio: Well then, why do we have to plant three forest trees to get a fruit tree?
Administrator: The goal of the program is to protect your soil, the more trees you plant the more your soil will be protected.
Julio: But I don’t have enough land to plant all those trees; if I plant trees that’s less room to plant corn. I just want to plant a few fruit trees near my home for shade and fruit, I don’t want to sacrifice my whole milpa to make a forest.
Administrator: If you don’t plant trees to conserve your soil you won’t have any milpa in a few years. Those are the rules of the project, three forest trees for every fruit tree.
Julio: A lot of us think you want to convert all of our land to forest so you can take over our land later and make it part of El Impossible.
Administrator: No, No, No that’s crazy ... where did you get that idea. The goal of the reforestation project is to help you conserve your soil ...
ii. Participants challenged the government experts based on their own investigation.

The meeting in which the citizens of Conacaste presented their water distribution plan to SalvaNatura and other government agency officials became confrontational at times. An official from the government water department, or ANDA, attempted to appease the community’s apprehension over an adequate water supply with vague generalizations about the watershed’s abundant capacity. The participants sensed his patronization and challenged him with the data they collected at different points along the San Francisco River. The official avoided the confrontation by vaguely expressing a need for further study. Following the meeting, one of the organizers who had participated in the water training, expressed his frustration to me, “I hate it when they [ANDA officials] say anything during an election year, just to get re-elected.”

iii. Participants questioned their accessibility to the market and ability to sell their crops compared with the large landowner.

iv. Participants questioned the limited education and employment opportunities for youth in the community.

The depth and nature of the problematization activity completed by the Organization training participants illustrates the capacity of some individuals to critically assess the political and economic dimensions of a situation (see Figures 6 and 7, p. 191).

Question D.
As a result of the training did participants develop a more positive and innovative perception of their relationship to their world?

Indicator
i. Participants referred to themselves as subjects who have power to obtain resources or introduce changes.
Participants encouraged others to join them to take collective action to improve their situation.

Participants conveyed a hopeful attitude about the power of the community to create a better future.

In the final sessions of each of the training programs the participants completed action plans. The action plans were designed to allow the participants to: 1) reflect upon any new skills or insights they acquired during the training; 2) draw conclusions as to what implications the training experience has had on their work and their lives; 3) produce concrete plans indicating specific actions they will take following the training; and 4) indicate actions they will take to motivate others to work with them.

The action plan process affected individual participants in different ways. For some it served as a planning tool and little more. For others it represented a new beginning for a more hopeful future. One individual referred to the action plan as an opportunity to “...change the world.” During the follow-up interview he indicated that although he had always been a hopeful person, this was the first time he felt he had the capability and motivation to do specific things to truly improve his community. He tried to clarify his sense of personal transformation by saying that prior to the training he knew that if he worked hard he would somehow always have food and shelter but felt he had little or no control about other aspects of his life. Now he understands what SalvaNatura and other government agencies’ interests are in his community and how they make they decisions. “We must make them [SalvaNatura and other government agencies] listen to us or we will never improve our community and we might lose our land and everything we have.”
The type and range of projects developed in the action plan phase of the training programs is presented earlier in this chapter (Theme I, Question 1, Indicator iv, p. 156-158).

Question
E. As a result of the training did participants become more concerned with the long term welfare of the community than immediate, personal gratification?

Indicator
i. Participants overlooked the short term benefits of SalvaNatura’s reforestation program and question its long term goals.
ii. Participants prioritized getting certification for a secondary school over other short term income generation projects.
iii. Participants collectively generated a year long development plan for their community.

Clearly every individual that participated in the training programs was motivated to some extent by personal gain. Many of the potential motivational factors are discussed further in the methodology chapter of this dissertation. However, in each of the training programs participants raised issues that required individuals to forego benefits for the common good. Nowhere was this phenomena more evident than in the Water training, where participants from upriver communities interacted with participants from down river communities. The discussions about components of a watershed and future planning acknowledged a sensitivity to the commons and the need for a participatory, holistic watershed wide process. All the participants at least adopted the discourse of personal sacrifice for the common good. However, certain individuals within each of the training groups internalized this concept of altruism to a greater degree than others.

After having met with SalvaNatura administrators in Tacuba, several small farmers were interested in participating in the reforestation project. In order to receive a quantity
of nursery grown native and fruit seedlings a farmer had to complete a short training on soil conservation and implement some soil conservation practices on his own land. One of the LC participants sacrificed time away from his own fields to take on a leadership role in organizing the farmers in his community to complete the soil conservation practices collectively. In a subsequent conversation, he indicated that although his time with the reforestation project may prevent him from planting his full crop of corn this year, the long term benefit of preventing erosion will guarantee him and his children a future crop.

**Distinctions Among the Three Training Programs**

For the purposes of this study the data from all three training programs were combined and considered as a single unit. The assessment framework presented in the previous chapter reflects this holistic approach. However, I was able to make some general observations about the differences among the training programs.

The Water training consisted of an intense three-day workshop. Because the topic of watershed management coincided with one of USAID’s priority issues, the training received recognition and financial support. Many of the training activities were experiential, field-based and required that participants work in teams. Participants were selected from four different villages or towns and were reimbursed for their travel to the training site. All the participants were literate and at least informally associated with the town or village school. School teachers, park guards and other municipal or government workers were able to attribute the days to professional development and collect their full salary. Lunch was provided for all three days of training.
The action plans arising from this training were concrete, detailed and clearly identified the individuals responsible for each phase of the plan. Wherever possible the plans incorporated the support of existing agencies and organizations (i.e. SalvaNatura, Ministry of Education, Green Project). The plans reflected the intent of the training to be watershed wide and took advantage of the organizations represented by creating an informational network for sharing the data.

The Organization training in San Francisco Menéndez involved six evening sessions with members of the existing Development Association. The Association usually met one evening a month and little was expected from members between meetings. In contrast, the organization training required that members attend sessions weekly and complete a substantial portion of the planning process between meetings. The participants received no financial incentive for attending the meetings other than the vague possibility of an increased municipal budget that might develop from a well-prepared development plan.

The final plan, prepared collectively by the group, basically consisted of a matrix listing the desired projects in one column followed by a general implementation timeline on the succeeding columns. Each project was further broken down into a series of steps or activities. The plan was meant to be an organizing tool to assist the Association in its effort to spearhead San Francisco Menendez’s development. Unlike the Water training, the Organization training did not have direct support from USAID, nor did it have immediate access to an existing network of governmental and nongovernmental development agencies.
Much of the impetus that gave rise to the LC training in Tacuba came from feelings of frustration and mistrust associated with the protected area, SalvaNatura and government agencies in general. The training program consisted of five Saturday afternoon sessions in the town of Tacuba. The participants were from surrounding villages and some had to walk as far as 12 kilometers to reach the training site. The participants received no financial compensation for participating in the training. Most attended because they were elected leaders and felt obligated to represent their respective communities. Their action plans consisted of a prioritized list of community development and natural resource management issues to be addressed by SalvaNatura through the Liaison Committee.

The topic area as well as the circumstances surrounding the training influenced the immediacy and the participants’ commitment to carrying out their action plans. For several reasons the participants’ experience in the Water training progressed almost immediately to action in the field. Factors which contributed to the Water training’s immediate impact included: 1) the topic and content of the training were of immediate interest to the participants; 2) the activities were experiential and enjoyable; 3) three consecutive days of training demanded continuity and focused attention; 4) immediate organizational support available for implementing the action plans; 5) project funding was available.

While the participants’ experience in both the Organization training and the LC training did not lend itself as readily to community action, it clearly contributed to a foundation for community controlled decision-making and development. Unlike the Water
training, the Organization and the LC training did not clearly fit into categories in which abundant institutional support already existed. Although participants attended voluntarily it was at the expense of other livelihood activities. Rather than a three-day, concentrated workshop, the training sessions were spread over a six week period. This meant that the sessions occupied a small part of the participants’ lives and the continuity had to be re-established at the start of every session. Although the topic areas were relevant to the participants’ lives, they were less pressing and clear-cut than clean water. Topics such as leadership and organization simply required more discussion before the participants could relate them to their own lives. The sessions consisted of discussions and consensus building, with fewer opportunities for outdoor, experiential activities.

In the following chapter, I expand on the findings and tentative conclusions that have emerged from this study.
CHAPTER VII
CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Introduction

The primary assumption underlying the implementation and analysis of this study is the conviction that the people whose lives will be directly affected by development efforts know best “what they need and want” and “how to do it”. The framework for presenting the data accumulated in the course of this study is more a creative exercise in discovery rather than a formal evaluation tool. Thus, I did not start out with a preconceived menu of what to look for to determine the impact of participatory training on development, but rather, I let the meaning emerge from a synthesis of the experience. By systematically examining the data and being intimately involved with all aspects of the research methodology, I was able to detect common characteristics or connections between things that may have been perceived as unrelated. Through the research process I have gained a better understanding of the essence and meaning of the social change process and hopefully, how to relate to it in a more constructive way.

Although I had identified and planned the general stages in my data analysis methodology at the outset, I was not sure how to specifically carry out each step before I reached it. Consequently, each step of the analysis depended on the results of the previous one. This uncertainty produced a lot of confusion, frustration and anxiety. On several occasions, I was tempted to abandon my open-ended process of analyzing the data and
instead create an arbitrary framework consisting of oversimplified direct causal links. This would have provided me with the luxury of “limited confines” inherent to positivist, empirical research. But by the time the final stage of synthesis was underway, I felt that this method was serving the purposes for which it was intended. I know that insights and conclusions recorded here to be valid within the context of the experience and evidence from which they were derived.

Questions and Issues

Evaluating the Human Experience

Investigation of consciousness-raising and transformation education is at the very least challenging due to the limitations associated with qualitative research. Despite the overview on coding systems for levels of consciousness described in Chapter V, there really are no standardized indicators that could be applied universally. As I was generating indicators within this theme, I found it extremely labor intensive and susceptible to distortions of interpretation.

Impacts were highly individualized and could only be assessed from my in-depth interaction with the participant and from the perspective of the participant’s life situation and history. I had the unique opportunity to reach this level of interaction because of my extensive contact with the participants. I came to know many of them fairly well prior to the training. Through the pre-training interviews, I grew closer to knowing the life situation and history of several of the participants. In my combined role of researcher and trainer, I guided them through the training praxis. Only after achieving this level of
intimacy (fusion of horizons), did I feel confident speculating about the participant’s consciousness level based on his/her actions and words.

The complexity of investigating transformation education is compounded when carried across issues. In one case, following the LC training, I was able to observe a participant take control and apply himself in a meeting on an issue that was discussed in the LC training. Following the meeting I conversed with him. From his actions and expressions, I sensed that he had critically assessed the issue and was challenging SalvaNatura to avoid misleading ambiguous rhetoric. It seemed that as a result of the training, his self-confidence improved, he was engaged in making his community more self-reliant and he genuinely felt the need for a more profound working relationship with SalvaNatura. However, at one point in our conversation, I made reference to a poor household on the outskirts of the village, and he dismissed them as “...lazy pigs that never participate in community activities.” Although he was able to name, and take action toward overcoming the power disparity between his community and SalvaNatura, he was unable to redefine his own relationship to a family within his community. According to the assessment framework developed for this study he has achieved a higher level of consciousness with regard to the training topic. But, as a result of my conversation, it would be inaccurate to speculate that this individual was critically conscious in all facets of his life.

Although I strongly believe that this study is a notable undertaking, it is laden with limitations associated with the profound nature of the material being examined. The
principle barriers limiting the depth of this study include, the short duration, the defined scope of the research and the difficult field based conditions.

Universality of the Assessment Framework

This study has developed, utilized and evaluated a framework for assessing the outcomes of participatory training. The framework partially responds to the incomplete understanding of the potential benefits and limitations of participatory methodologies as they are applied to rural communities. The framework presented here provides a gateway to a more profound dialogue about the realistic outcomes of participatory methodologies. It is not intended to be a final product nor an evaluation instrument to be applied universally. The assessment framework provides considerations and insights for researchers, development practitioners and planners to include in planning participatory methodologies for rural development.

As it stands, the assessment framework developed in this study is partially built upon a critique of standardized, positivist evaluation methods. The framework challenges the evaluator to prioritize the accumulated knowledge and perceptions of the program participants. It is essential to acknowledge the commonality and the diversity inherent to the participants' experience. To apply this framework as a quick and dirty instrument to assess short term outcomes, makes the researcher vulnerable to imposing homogeneity both across and within rural communities. The strength and validity of this assessment framework is that the research process itself was built upon the differences and similarities of the actions and perceptions of the program participants. Any attempt to arbitrarily
apply the framework as an instrument and circumvent the full research process could gloss over the complex and subtle interactions that reveal human transformation.

This documented case study provides essential information about assessment areas and indicators that cover the range of human and physical outcomes that may be derived from a participatory process. The assessment areas developed for the framework, listed in the first column of Table 2, reflect the data generated for this study and the existing literature on rural development and critical pedagogy. Far from being an exhaustive list of all the potential areas of impact, at the very least it expands the conventional spectrum of outcomes to be assessed following a training intervention.

This framework should serve as a starting point and guide to ensure that the design of any training program evaluation accounts for the full range of concrete to abstract potential outcomes. The framework itself is a pilot effort which should be refined and expanded based on further research

**Researcher Bias**

It is impossible to completely account for my influence on the findings. Investigating an environment in which I had a stake both in the training program and the research results imposes an obvious bias. I am committed to participatory training, the social transformation goals of critical pedagogy and the conservation of dwindling natural resources. I am completely embroiled in the research subject and have a large stake in demonstrating the benefits of participatory methodologies.
While I have tried to utilize strategies in order to document, and account for personal bias, this study is highly dependent on how I gathered, analyzed and interpreted the data.

**Participant Bias**

The very act of participating in the training had a positive impact on the participants. Although, I triangulated the data for validity and tried to be consistent in applying the research methods, it is impossible to completely account for the effect participant sympathy and support for the training programs may have had on the results.

**Recommendations for Future Research**

Clearly there is a need for more research into viable evaluation strategies for assessing the range of impacts resulting from participatory methodologies. This should include alternative research designs and reliable assessment criteria for investigating the more abstract goals of participatory approaches in rural development.

The natural continuation for this project is to return to San Francisco Menéndez and Tacuba and compare the assessment framework to the long term impact of the participatory training programs. More investigations are needed to assess the utility of the assessment framework developed in this study.

**Lessons Learned from this Study**

Academics and practitioners in the field of rural development and nonformal education tend to generalize about the benefits of participation in development. They assume that participation goes hand in hand with social transformation and empowerment.
This study shows the need to step away from the rhetoric and romanticized ideal of participatory approaches and look closely at the interactions that happen at all levels, especially participant to participant within the training program.

Even in the best training programs, soundly based on the principles of critical pedagogy and participation, not all the participants will emerge with a higher level of consciousness, transformation, liberation, self-respect or any other human development milestone. Freire reminds us that no one can transform anyone else "...liberation is like a childbirth, and a painful one. The person who emerges is a new person, no longer oppressed or oppressor, but in the process of achieving freedom" (1970, p. 53).

A more traditional impact evaluation would not have revealed all the subtle changes in attitude and perspective that some of the participants demonstrated during and after the training program. Neither a checklist nor a questionnaire survey of actions participants undertook upon completion of the training program could provide an evaluator with enough information to determine the range of outcomes derived from the participatory training methodology. Such a conventional instrument is limited to at most describing the application of new skills acquired from training. Abstract concepts, such as human liberation could never be detected by instruments created within a positivist paradigm. Only by accompanying the participants through every stage of the training and carefully documenting their and my interactions, was I able to equate certain changes in attitude and behavior with a higher level of consciousness. Hence, the strength of this study is the micro-level of analysis upon which the assessment framework was built.
Community/Organization Interactions

Although SalvaNatura is directing much attention to the surrounding communities, its ultimate mission remains that of managing the park and protecting El Salvador's biodiversity. Correspondingly, as revealed through a community consultation completed in 1996, each community also has its own development priorities.

In an ideal world SalvaNatura's priorities would be the same as those of the surrounding communities. The reality is that at best some of priorities overlap (i.e. protecting the watershed) but many more don't (electricity, telephone, paved roads, etc.). Within this context, SalvaNatura will inevitably reach a point where it is no longer in its interest (cost effective, etc.) to expand its community outreach program. At the same time, it will have established a relationship with the communities by enabling them to address some of their priorities. This process will also generate greater expectations on the part of the surrounding communities. As the park management and community development programs progress, the relationship between SalvaNatura and the surrounding communities will change.

The changing gap defined by what SalvaNatura hopes to gain by garnering community support contrasted with what the communities hope to gain by working with SalvaNatura is a critical dynamic. The process of local groups organizing, coming to consensus and articulating demands regarding their use of land and natural resources inevitably involves the exercise of power, and resistance to it. Nowhere has this been made more clear than in the tumultuous progression of Salvadoran society. Therefore, conflicts over the management of natural resources require new social relationships, most
notably between government institutions, nongovernmental organizations and local communities.

Past experience has shown that in some cases a radical break has been achieved, through which existing relations of power were transformed, but as Foucault argues, there is no guarantee that the new relations of power will be more stable than those they replaced (Redclift, 1994, p.13).

The clear implication of this kind of reasoning is that a priority concern which rural development methodologies need to address is the ways in which the rural poor seek to affect more control over the resources they have always depended upon. It is this relationship, between local people and structure (outside institutions, policy), which will ultimately determine the degree of control rural people have over their own lives and how the environment will be managed.

**Redefining Participation in Rural Development**

Through the participatory training employed in this study, I attempted to acknowledge and explore the complexities of rural life. By recognizing that participation involves more than "participation in" the participants from San Francisco Menéndez and Tacuba increasingly became actors, rather than instruments in their own development. Although each of the training programs strived toward a theoretical goal of empowerment, it is important to recognize and accept the practical limitations of any methodology that brings insiders and outsiders together. Communication around natural resource use, agriculture or any aspect of rural livelihood, is far from straightforward. No
one can step out of her/his way of knowing or the confines of his/her own discourse (Hacking, 1983). Conventional methods for communicating what is known or demonstrating what is done, require that outsiders interpret the intentions of insiders. Although no method can completely escape the paradox of hermeneutics, the alternative methods employed here, such as community mapping, role playing and participatory investigation, do provide further opportunities for interpretation.

There is always a danger of drowning in pluralities within a community. If many different views of the world are acknowledged, then no single version can fulfill everyone's expectations. Yet choices were inevitably made throughout the training programs. Coming to consensus and choosing a direction (or a side) became a matter of context (applicability and appropriateness at that time). Choices inevitably were made on the basis of political and personal beliefs or lifeworlds. Training or development methodologies that are explicit about such choices offer a much greater opportunity for profound participation.

Whatever the development issue the participatory methodology is attempting to address, the focus has to be on process rather than technical solutions. Accepting this construct requires that key assumptions be adopted in planning and implementing any rural development intervention. First, rural development must be recognized as a long term process and the participants' experience prioritized. Second, diversity within rural communities and among external agents needs to be addressed by recognizing that different actors hold different lifeworlds. Third, issues of power, control and conflict need
to be considered, challenging both the nature of interactions within the community and between insiders and outsiders.

Traditional use of land and surrounding natural resources were embedded within a complex of historical and interactive processes. There was no practice or perspective held in the communities surrounding El Imposible which were external to the wider dynamic system. In this case the establishment of El Imposible imposed a very visible and sudden change. The key to this research was acknowledging the dynamic nature of community interactions, including both insider/insider and insider/outsider dynamics. These interactions were neither static nor universal.

**Sustainability and Rural Development**

A methodological implication of treating rural development as a dynamic process, is the need to build in sustainability. Because neither project funding nor a community's enthusiasm to adopt change will last indefinitely, the most effective participatory methodology will strive to strengthen a community's capacity to generate its own lasting solutions. The participatory training methodology used in this study focused on building skills to enable participants to control their own development. Even more important than skill building, by engaging the participants in *praxis* the methodology strove to provide the participants an opportunity to converge with the transformative goals of critical pedagogy.
Diversity and Rural Development

To a large extent, this study was confined by the existing social structures within the research site communities. Due to the short duration of the field research, I did not have an opportunity to address issues of diversity or location within communities, and between organizational levels. Most of the training participants were men who depended on subsistence farming for their livelihood.

A portion of each of the programs was dedicated to an examination of how individuals perceive events within their own lifeworlds. In retrospect more time should have been spent systematically addressing the issues of gender, age and ethnicity. However, within the communities categories of difference were far from straightforward. They were multi-layered and context-specific. In order to effectively incorporate issues of diversity into a rural development training program, it is critical that the categories of difference be based on local perceptions, rather than imposed by external value systems. These complexities present crucial methodological challenges.

Role of the Outsider

Ideally, the training programs were designed to transfer control of the training and eventually the development process to the participants. The literature advocating for participatory approaches stresses that it is the knowledge and solutions of rural people which count, yet does not adequately cover what implications this has for the outsiders role, expectations and influence (Cornwall, 1994, p. 114). Each individual that contributes to a rural community, and who is encouraged to control her/his own research, has a

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relative position of power. Each position offers different access to resources and a larger support structure. As different interest groups or individual *lifeworlds* are consulted, different versions of community needs emerge. Herein lies not only the methodological challenge, but the key to the process of genuine empowerment itself. A presumption common to several popular methodologies is an over simplistic notion that thoughtful dialogue will automatically lead to consensus. As a result of this experience, my appreciation of the complexity and difficulty of building consensus grew immensely. On several occasions, I was faced with the practical question, “Whose side will be taken and what is my role in determining how it will be decided?” Such a political question is relevant, because not only did it determine the short term outcome but also it also established the process for enacting some solutions and blocking others.

Much of the kind of externally generated rural development this research explored is based on my interaction as an outsider with the participants. While the research and training methodologies I discussed here highlight the importance of good rapport, ultimately my role and influence as an outsider on the nature and direction of rural development is only partially recognized.

According to Fals Borda, Participatory Action Research (PAR) consists of research as a process of mutual learning between people with different *lifeworlds* (*vivencias* in Spanish) (1991). The conventional subject/object relations between researcher and researched, and their inherent power relations, are devalued and the actors strive for a common goal. The theoretical ideal of PAR, which consists of an equal
relationship between outsiders and insiders, with no distinction between researcher and researched, presents a substantial methodological challenge.

Opening up external institutions and enabling rural people to understand the political structure as well as the technical workings of western science in practice is as important as nurturing an appreciation for the complexity of local knowledge on the part of development practitioners. The challenge is in building local capacity for rural people to control their own development yet still have access to external resources within a complex world consisting of unequal power relations.
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