

PERMACULTURE IN EL SALVADOR:
AN ALTERNATIVE TO NEOLIBERAL DEVELOPMENT

By Robyn Thiel Wilson

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Approved:

Miguel Vasquez, Ph.D., Chair

Karen Schairer, Ph.D.

Cecilia Ojeda, Ph.D

ABSTRACT

PERMACULTURE IN EL SALVADOR: AN ALTERNATIVE TO NEOLIBERAL DEVELOPMENT

Robyn Thiel Wilson

El Salvador is a traditionally agricultural country that is moving forward with neoliberal development and industrialization. It is also a country in severe environmental and social crisis due to centuries of exploitation and abuse. The Permaculture Institute of El Salvador is sustainable community development organization that is working to improve the environment and the quality of life for the marginalized rural poor. They combine permaculture practices and philosophy with the local culture and climate to create an effective and empowering movement. Utilizing the Mesoamerican Farmer to Farmer Movement, people not only become ecological farmers, but also permaculture promoters and community leaders.

In the age of growing concern of global warming, peak oil, and failing conventional agriculture, there are growing grassroots movements in search of an alternative to industrialization and neoliberalism. The work of the Permaculture Institute of El Salvador provides evidence that an alternative is possible, even in a severely degraded land. By focusing on strengths instead of weaknesses, and turning obstacles into opportunities, they bring hope to communities struggling to retain their traditional lifestyle. They are both an inspiration and a guide, demonstrating what is possible in El Salvador and the rest of the world.

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DEDICATION

Any project as large as a thesis is only possible with the cooperation of a large community of people. In the last four years, I have had the privilege of working with people of great knowledge and generosity. I thank my committee, and many others at Northern Arizona University with whom I have worked academically and professionally. I have also created invaluable relationships with permaculture, and peace and justice activists in the Flagstaff community, from whom I have benefited in many ways. This education was possible because of the unconditional support and love from my parents, my family, and my friends. Most of all, I am indebted to my husband, Ryan Wilson, for his companionship through this journey and those to come.

A mis amigas y amigos de El Salvador. No puedo explicar mi gratitud por su amistad. San Pedro Masahuat, La Paz, es parte de mis pensamientos y mi alma. Edgard Ramírez Sánchez y la familia nos han enseñado y hecho tanto por nosotros en los últimos siete años. Muchísimas gracias a los miembros del Insitito de Permaculture de El Salvador, especialmente a Karen Inwood y Juan Rojas, por su dedicación, inspiración, y apoyo. En solidaridad...

“A los hijos e hijas de mi tierra”

*Aves danzarinas de misterios indescritibles
Sollozando
Cantando
Gritando
Bailando*

*Alegrando mi alma en nombre de “los mil hijos e hijas”
que esta madre tierra ha visto nacer.
Pronto serán hombres y mujeres!*

*Y mi “Loco Corazón” abrumado y lleno de temor está
por la “Herencia cultural y el reto”
que debo dejar en sus manitas de algodón.
Aquí en mi tierra hay que luchar día a día! ...
... Deben luchar por la sociedad
Rescatar valores perdidos
Descubrir soluciones
Algarabía de mis días tristes
Carrousell de mis atardeceres
Soñar que serán
lucero que alumbre
montaña extendiendo sus brazos
albergando esperanzas
Océano donde encuentren
tesoros de sabiduría
Mujer si mujer
Hombre si hombre
que desde su amor*

*Los cansados
Los débiles
y los maltratados
Encuentran: deseos de seguir,
Verdades eternas,
y las huellas del hacedor
que les ayuden a emprender su ruta
Vengan pequeños!!
Abrázenme...
Rodeen mi cuello
Bésenme
y dejen que mi “tonto corazón”
estalle de emoción
mientras escucho
su voz que me llama MAMA.*

*~ Norma Celina Gámez (1997, p.229)
“Mujeres en la Literatura Salvadoreña”*

INTRODUCTION

PERMACULTURE IN EL SALVADOR

I arrived in El Salvador in May of 2000 with a group of twenty-five Municipal Development Peace Corps Trainees. We flew from Miami, over Cuba and the Yucatan, to finally descend over seemingly endless Pacific coastline and beaches. The view on the other side of the plane displayed a landscape bursting with green volcanoes and mountains. It was an incredibly beautiful welcome to “Cuscatlan” or “The Land of Jewels”, as the native Pipils once called their home. It was the beginning of the rainy season, and the heat and humidity were overwhelming as we left the airport. The bustling culture immediately caught my attention. There were women selling coconuts and homemade breads. Pick-up trucks sped up to the curb, people jumped into the back, and they zoomed off again. Dozens of family members anxiously waited the return of their loved ones. I was overwhelmed and it occurred to me that I was about to learn more in the next two years than I had in the rest of my life combined. I was right.

I learn from everyone I meet in El Salvador. Among many other lessons learned, the children taught me Spanish, the women taught me the arts of home keeping, cottage industry, and strength, and the men taught me the reality of farming, grazing and building. However, not only did my new Salvadoran friends teach me another language and culture, but they also shared the reality of poverty, struggle, and resistance. They taught me resilience, to face obstacles, and find empowerment in impossibility. I learned about generosity, patience as well as the meaning of community.

After three months of training in San Vicente, I then worked for the next two years in municipal development in San Pedro Masahuat, La Paz. During that time, I learned important skills about community organizing, reforestation, disaster relief, and

the structure of international organizations. But more importantly, I learned about life from the people I lived among. I love them for it and know that I will never be able to repay them for having such a big impact on my life.

During this time, I also learned that I wanted to discover a plan for development that would adequately meet the people's needs with local resources. The plan needed to be sustainable for future generations, and decrease the vulnerability of the environment and native species to human and natural disasters. It needed to utilize local people's strengths, encourage reciprocity and community, and build upon the local climate and culture. I wanted to learn about this type of sustainable development, but I had yet to discover it.

After my service ended, my husband and I traveled for six months through of Central America and Mexico by bus. In Utila, Honduras we met a young man who was visiting permaculture farms throughout Central America. He explained permaculture to me and the more we talked, the more I realized this was worth further research. My husband and I came to school in Flagstaff and I studied sustainability, community, education, Spanish, and permaculture through various educational institutions, farms and experiences. My conclusion is that permaculture can serve as the sustainable development plan for which I was searching in El Salvador.

Before returning to El Salvador for research in June, 2006, I discovered the Permaculture Institute of El Salvador (IPES). I contacted them and was able to stay at their training center. During that time, I video recorded their meetings, interviewed the founder, executive director, staff, and promoters. I also traveled to several of the rural communities and toured farms and interviewed community members. Through this

investigation, I learned that these men and women are practicing what I believe is a viable sustainable development model for El Salvador because it combines indigenous knowledge and the local culture with sustainable living principles and ecological agriculture. It requires hard work, dedication, and vision, but it is a sustainable alternative. It has proven to improve the lives of people who practice it and their land. I believe it is an alternative to the industrialized life-style throughout El Salvador and the world, if applied consciously to the local climate and culture. I hope this thesis provides a map for other cultures that might want to preserve their traditional, life-affirming values through the relentless march of globalization.

Thesis Layout

This thesis describes the environmental, social and economic situation in El Salvador, and how the work of the Permaculture Institute of El Salvador (IPES) utilizes the climate and culture to build upon these conditions. Permaculture is an interdisciplinary philosophy based on three ethical principles: earth care, people care, and fair share. I use these ethical principles to layout the themes of each chapter in relation to El Salvador's land, people, and economic policies. In each chapter, I briefly explain the current situation and the history of each. I then conclude each chapter with an explanation of how the Permaculture Institute provides an alternative development model to neoliberalism in a country with serious social and environmental concerns.

In chapter one I define permaculture, and its design and ethical principles. Although there are specific techniques and strategies utilized in permaculture, it is a sustainable development model that can be adapted to any climate and culture. IPES promotes this interdisciplinary approach to sustainability and community development

throughout rural communities in El Salvador. I summarize the history of permaculture in El Salvador through the work of IPES, and end on the future aspirations of their work.

Chapter two entitled Earth Care, focuses on describing the environmental context of El Salvador. I present an introduction to the current environmental conditions that Salvadorans face. Because 62 percent of the rural population lives on 8 percent of arable land, millions of people are directly and immediately affected by environmental degradation and natural disaster (Jovel, 2005). This emphasizes the urgent need for awareness and a change in behavior on a national and local level. A brief description of the history of colonialism and cash crops is provided in order to understand the extent of the degradation and how a country can arrive to this point. I then explain how the basic principles of Earth Care can rehabilitate the land. Through conversations with the founder of permaculture in El Salvador and rural promoters, I define the differences between conventional and ecological agriculture. This chapter concludes with a summary of IPES' work and what they hope to achieve in the near future.

Chapter three is based on the ethical principle of People Care. I first describe the poverty and current social issues that exist in El Salvador due to hundreds of years of exploitation and neglect. This establishes the urgent need for change, as thousands of people die or relocate each year directly due to conditions of extreme poverty. Although not every Salvadoran desires a rural life, thousands of people do indeed wish to retain their traditional agricultural life style. However, it is increasingly difficult for them to do so because of environmental problems and collapse in the national agricultural market. Permaculture practices can support this rural life style as well as improve the land, health, and social conditions for the people. IPES utilizes the Mesoamerican informal education

methodology of *Campesino a Campesino* (Farmer to Farmer) to spread ecological farming methods and community development. This methodology is closely linked to liberation theology and popular education, both of which were highly successful in El Salvador (Holt-Gimenez, 2006). I include a brief history of these social movements because they are essential for understanding the culture and informal education practices that have proven effective in that region. The chapter concludes that all of the ingredients that people need to solve their current problems are locally found. IPES serves as an educational institute that trains rural farmers how to manage their property and life in a way that can lead to a healthy and sustainable future; however, it is the people's dedication that makes it a reality.

Chapter four is based on the third ethical principle, Fair Share. I describe the direction of development for which the governments of El Salvador and the United States strive. Although trade between the two countries has a long history, neoliberal development in El Salvador officially began in 1989 with the election of the ARENA party president, Christiani. Even though they have implemented these policies for seventeen years, statistical analysis presents a case that they are not benefiting the rural poor. An alternative must be available for those who wish to retain their rural lifestyle. Although drastic national policy change is needed; I do not foresee neo-liberal development disappearing from El Salvador. El Salvador has had a global economy since the arrival of the Spaniards over five hundred years ago, and now more than ever their economy is based on remittances and foreign investment. Some people believe that industrialization is the model that will raise the country out of poverty, but others disagree. I argue that even if a government is committed to neoliberal development, there

must an alternative available for those who do not wish to abandon their homeland and traditional agricultural lifestyle. Governments must acknowledge this and work to achieve sustainable solutions to deter the negative repercussions of extreme poverty and severe environmental degradation. This would increase social stability and food security, which would benefit the entire country.

In conclusion, I revisit the main points, which include the current conditions of El Salvador require urgent attention, permaculture and the work of IPES provide an alternative to industrialization, and utilizing the Farmer to Farmer methodology is effective. IPES also goes beyond permaculture to include community, women and youth development. They offer a positive model for development that others can follow. People who work in community development know that this is a long and slow process. But the length of time should not discourage policy makers or communities; instead this should further emphasize the urgent need for this work.

Permaculture is a global movement, with global support, reacting to global issues; however, it is also a local movement, with local support, reacting to local issues. Through respect for traditional knowledge, the native culture, and the local climate, permaculture is a unique interdisciplinary approach. By creating value in sustainable, independent life styles, and utilizing local resources, the poor around the world can achieve a better life for their families while supporting nature. By focusing on a country with advanced environmental and social problems, as well as a commitment to neoliberal development, this thesis is not only an example of development for El Salvador, but for everyone who desires a healthy and sustainable future based on integrity and community.

CHAPTER ONE: PERMACULTURE

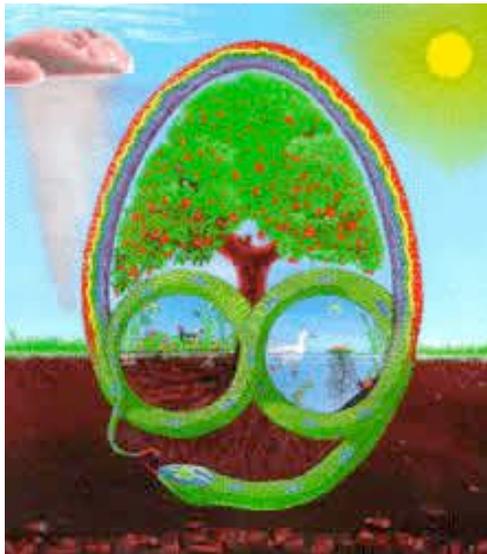


Figure 1:1 The Rainbow Serpent

The great oval of the design represents the egg of life; that quantity of life which cannot be created or destroyed, but from within which all things that live are expressed. Within the egg is coiled the rainbow snake, the Earth-shaper of Australian and American aboriginal peoples. Within the body of the Serpent is contained the tree of life, which itself expresses the general pattern of life forms. Its roots are in earth, and its crown in rain, sunlight and wind. Elemental forces and flows, shown external to the oval, represent the physical environment, the sun, and the matter of the universe; the materials from which life on earth is formed. (Mollison, 1990)

This chapter defines permaculture, and briefly explains the design and ethical principles on which it is based. It then discusses the evolution of the permaculture movement in El Salvador and the formation of the Permaculture Institute of El Salvador (IPES). Finally, it argues that permaculture can provide relief to this country with serious social and environmental concerns. This chapter serves as a basis for the rest of the thesis, which is constructed around the three ethical principles of permaculture. These chapters are rooted in the historical and current environmental, social, and economic conditions in the country proving the necessity for a sustainable living alternative for the rural poor. I apply the work of IPES and permaculture philosophy to these conditions as

the proposed alternative for the rural poor of El Salvador. Although I only focus on El Salvador, I believe that the philosophy of permaculture could improve the quality of life for millions of people around the world and slow environmental concerns, such as global warming.

Permaculture

Permaculture is a whole-systems philosophy and approach rooted in the ethics of caring for the Earth and all its inhabitants. Formulated by Australians Bill Mollison and David Holmgren in the 1970s, it is a philosophy based on designing human habitats and sustainable food production systems that mimic nature. Permaculture is defined as:

Consciously designed landscapes which mimic the patterns and relationships found in nature, while yielding an abundance of food, fiber and energy for provision of local needs. People, their buildings and the ways in which they organize themselves are central to permaculture. Thus the permaculture vision of permanent or sustainable agriculture has evolved to one of permanent or sustainable culture. (Holmgren, 2002, p. xix)

Permaculture is an environmental development system that combines ancient traditions and appropriate technologies. It promotes the welfare of earth and people as the primary focus. Permaculture is a combination of the terms permanent and agriculture, but the combination of permanent (sustainable) culture is more accurate because permaculture philosophy involves all aspects of life (Holmgren). It is based on five foundational tenets which co-founder David Holmgren has listed:

- ❖ It is a consciously designed system, which mimics the patterns and relationships found in nature.
 - ❖ It is a system, which incorporates sustainable land management practices.
 - ❖ People, their buildings and social organization are central to permaculture.
 - ❖ Permaculture empowers us to move away from being dependant consumers to be responsible producers.
 - ❖ It is an energy saving, non-polluting system.
- (Holmgren, 2007)

Bill Mollison and David Holmgren developed this philosophy in response to the apparent need for a sustainable alternative to neoliberalism and the global industrialized model. Neoliberalism promotes the spread of industrialization (Chomsky & Dieterich, 1999). Examples of the degradation caused by industrialization can be seen by changes since the hallmark of capitalism, the Industrial Revolution, began in England in the early 1800s. Ed Ayers in *God's Last Offer* (1999) describes four factors that have changed drastically since the beginning of the Industrial Revolution.

These four factors include increases in carbon dioxide, extinction of species, consumption, and human population. These factors explain the destructive nature of industrialization and why a sustainable alternative is vitally needed throughout the world. The first is the increase of carbon dioxide gas concentration in the atmosphere. For eight hundred years, from 1000 to 1800, the amount of CO₂ in the atmosphere was relatively stable at 280 parts per million. By 1998, it increased to 370 parts per million, and will continue to so at rapid rates as long as the unindustrialized world continues to be industrialized (Ayers). El Salvador is an example of an unindustrialized country in rapid industrialization.

The second factor is the extinction of the world's species. Until 1800, the rate of extinction was roughly 500 species per year. Since the industrial revolution, the number has increased to over 20,000 species a year (Ayers). This number continues to rise as their habitats are eliminated, global warming changes conditions, and new disease and poaching eliminates the already sparse populations. This is alarming for the natural world, including the human population because we depend on plants and animals for

food, shelter, medicine and recreation. The lower the diversity, the more vulnerable the existing species are, including the human species.

The third factor is the increased rate of consumption since the Industrial Revolution. In 1800, the Gross World Product was less than two billion dollars; in 1998, it was thirty-nine trillion dollars (Ayers). Increased consumption increases the use of natural resources, and pollution. As the need for natural resources increases, as well as the levels of carbon dioxide, natural habitats are altered and destroyed. Loss of habitat leads to further species extinction.

The fourth factor is the extreme rise in the human population. In 1825, the human population had increased to one billion people due to agriculture and exploration. Today the world population is about 6.6 billion people (U.S. Census, 2007). The increasing human population compounds the problems, which results in a vulnerable world of too few species and too few resources to support the growing demands (Aryes,1999).

In *Permaculture: A Designer's Manual*, Bill Mollison (1990) states, "The only ethical decision is to take responsibility for our own existence and that of our children." (p.1). There are specific ethical and design principles that are the foundation of this philosophy, including the provision that any principle must be practiced in accordance with the local culture and ecosystem. Therefore, once taught the principles, the local community creates their own design according to their customs, needs, climate and resources. These principles can be applied anywhere and provide for the needs for humans and the environment.

Permaculture Design Principles

Permaculture is based on ethical and design principles of sustainability that preserve and improve quality of life for all species. Permaculture participants consider the environment as a living and holistic system whose health depends on ecologically sound practices. These principles lay a foundation for successful adaptation to sustainability. The design principles include practices that provide for people's needs, that conserve the resources of land and energy, that involve self-regulation and personal responsibility, that limit waste, and that value adaptability. According to David Holmgren, "The principles are simply thinking tools to assist us in identifying, designing and evolving design solutions," (Holmgren, 2007). With these principles, appropriately applied to the local environment, climate, resources, and culture, people learn to reduce their impact and live sustainably.

Permaculture Ethical Principles

Along with the design principles there are three ethical principles in permaculture, which incorporate environmental, social, and economic needs. David Holmgren (2002) describes the ethical principles in *Permaculture: Principles and Pathways Beyond Sustainability*. The ethical principles are applied to El Salvador in the following chapters.

The first ethical principle of permaculture is called Earth Care, also referred to as Care for the Earth. Earth Care is defined as the provision for all life systems to continue and multiply. Permaculture is based on natural systems, working with nature, not against it. Because nature is viewed as the ideal model for sustainability, permaculture mimics the natural environment.

The second ethical principle of permaculture is titled People Care, or Care for People. It promotes self-reliance and community responsibility, allowing everyone access to the resources necessary for existence. Care for People begins with the self, but spirals out to include family, and wider communities. Care for self is of primary concern because one must be healthy and secure in order to contribute to a wider good.

Fair Share addresses the limits to consumption and reproduction and the redistribution of surplus. As people restrict their own needs and wants, they can set resources aside to further the principles of Earth Care and People Care (Holmgren, 2007). This ethic is based on the belief that we only have one earth, and we have to share it -- with each other, with other living things, and with future generations. This means limiting our consumption, with the goal for everyone to have access to the fundamental needs of life (Holmgren).

The Permaculture Flower

Holmgren has created a flower image for visualizing this holistic system, which incorporates the design and ethical principles. It is not my purpose to elaborate on this complex organism, but it offers a pictorial representation that underscores the larger permaculture idea. The flower begins with the ethical and design principles. These spiral out through the seven domains of life, which are represented by the flower petals. Through these principles, people can learn to live with integrity through all aspects of life by appropriately applying them to their local climate, culture and available resources. This flower is a guide for those who wish to learn how to live a sustainable and healthy lifestyle while caring for the environmental, social, and economic needs of the wider community.

evaluation of the site and situation specific solutions necessary to move beyond the limited successes of sustainable development to a reunion of culture and nature,” (Holmgren, 2007). Permaculture is fundamentally based on indigenous knowledge; therefore the practices vary from one place to another because indigenous customs, practices and knowledge vary, as does the local climate and available resources. This means permaculture looks much different in El Salvador than it does in other parts of the world.

Permaculture will not make families financially prosperous. However, it will improve personal health, the condition of the environment, increase income generation, increase independence from industrialized foreign systems, and strengthen community. It also allows the agricultural family to continue to provide for themselves in a traditional manner. Educating the rural poor about permaculture and ecological agriculture has proven to be a viable alternative for the people of El Salvador even in its early stages of implementation.

Permaculture in El Salvador



Figure 1:3
Juan Rojas at his house in La Florida, La Libertad, El Salvador
Photographer: Robyn Wilson

A man named Juan Rojas brought permaculture to his country after spending several years in exile. At the dockyards, he became involved with the labor unions. When the

civil war began in 1980, Rojas was forced to flee his country and went into exile in Mexico. He described the situation:

This was because my work with the union. Union and church workers were banned, called communists, subversives. We were living under a military dictatorship, so these were the terms they used. I had a warning the day before. A justice of the peace told me to get away because the army was asking him for my whereabouts. Out of fifteen of my mates in the union, only three are still alive. I was only twenty-one and very frightened. I had to leave everything behind: house, job, friends, my wife and our two small kids.

(Boyd-Macrae, 2004, p. 2)

In Mexico, he worked as an electrician and got involved with the growing number of Salvadoran refugees fleeing their country. He participated in founding the Salvadoran Refugee Coordinating Body and supported the revolutionary forces, to raise money and spread the news of the atrocities committed in El Salvador. After four years, he was advised to leave Mexico due to his Salvadoran solidarity work and was once again forced into exile. The United Nations High Commission for Refugees granted Juan Rojas political refugee status and he relocated to Australia (Boyd-Macrae, 2004). At the designated hostel for refugees, Juan met other Salvadorans and they quickly continued their Salvadoran solidarity work.

He consistently searched for ways to help his homeland and serendipitously discovered permaculture. Because permaculture was created in Australia, he was able to learn directly from the founders, Bill Mollison and David Holmgren. In 1992, Juan went to Cuba to aid in permaculture education. Because of the signing of the Peace Accords, he was finally able to return to El Salvador. He quickly became involved with trying to rebuild the war-torn country using permaculture and sustainable living practices. Juan said, "My motivation is to put something back into my country. When you see those people in a very deprived condition, acting with a lot of joy, thanking God for their lives,

for their fragile health, for the simple and basic things of life and moving forward; that's hope for me," (Boyd-Macrae).

In 1993, Juan Rojas first began his work with the Christian Base Communities and the Farmer to Farmer network to spread the permaculture practices and beliefs in rural Morazan, and then in La Libertad. In 2000, Juan traveled to a permaculture training at the Findhorn Foundation in Scotland. There he met Karen Inwood. She has a professional background in community development and non-profit organizations, and was also trained in permaculture. They returned to El Salvador to begin the process of establishing a permanent training center and the Permaculture Institute of El Salvador. Juan Rojas is now an international permaculture consultant for the Mesoamerican Permaculture Institute and coordinates permaculture design courses for subsistence farmers. He lives on a beautifully permaculture-designed plot of land in La Florida near IPES. Karen Inwood is the Executive Director of IPES and continues to develop the means to support and train sustainable communities through the Farmer to Farmer Methodology and community organization activities.



Figure 1:4
Karen Inwood at IPES, La Florida,
El Salvador
Photographer: Robyn Wilson

Instituto de Permacultura de El Salvador (IPES)

The Permaculture Institute of El Salvador (IPES) is a successful and effective example of place-based sustainable development. Oxford's American Dictionary (1999) defines development as the act of improving by expanding or enlarging or refining. The World Commission on Environment and Development (1987), in *Our Common Future*, defined sustainable development as, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (p.1). There are two main arguments criticizing sustainable development as an all-encompassing philosophy. The first is that sustainable development does not sufficiently balance the environmental, the societal, and the economic needs; therefore it is not sustainable. All alternatives the current situation must consider these needs with equal importance (Dreo, 2006). The other criticism is that sustainable development plans do not sufficiently value or adjust to the local environmental, societal, or economic needs and conditions. Great care must be taken to appropriately adapt the proposed alternative to the local culture and climate, and to ensure that it builds on the local strengths and addresses the local concerns (Escobar, 1999). IPES is both balancing the environmental, social, and economic needs of El Salvador, and appropriately applying sustainable living and agricultural practices to the local culture and climate. They are the best example of sustainable development I have encountered in El Salvador.

IPES is a conglomeration of members working together to spread knowledge about sustainable living and agricultural practices, as well as community, women and youth development. Created by and for Salvadoran people, the institute serves as an agent acting in response to five hundred years of abuse to the land and people of El

Salvador. They offer education about an alternative to the destructive ecological and social tendencies of the current practices. Using permaculture as a base to their instruction, they teach subsistence farmers how to create their own sustainable environment while increasing food production and diversity. Providing for loved ones is a basic value that people around the world share and understand. Permaculture provides the principles for all of us to implement this love into everything that we do.

IPES was founded in 2002 after ten years of permaculture work in rural areas. The work with the Christian Base Communities and the Farmer to Farmer Movement inspired the organization's philosophy of community empowerment, social justice, and environmental restoration (Inwood, 2005). Their vision is, "To build a network of sustainable rural communities committed to working collectively to overcome poverty, care for the environment and recover ancient Mayan traditions." They plan to accomplish this through their mission, which is "to provide sustainable living alternatives for the poor in El Salvador's rural and marginal communities" (Inwood).

IPES focuses on training in ecological agriculture, and leadership as well as expanding and strengthening the Farmer to Farmer Movement, (Inwood, 2005). They also have growing women and youth groups, and have just begun a three year project teaching water and sanitation. The following values are fundamental to their work:

- ❖ Co-operate and live harmoniously with nature
- ❖ Place earth restoration at the heart of all activities for the benefit of future generations
- ❖ Believe in the vitality and ability of the Salvadoran people to transform their own reality
- ❖ Support community living for the development of the individual and of society
- ❖ Believe in the core indigenous belief of the life giving, spiritual force within the universe and the fundamental interconnectedness of all life. (IPES, 2005)

They utilize the Farmer to Farmer Methodology to demonstrate and teach ecological farming practices and other permaculture techniques to create a healthy lifestyle. Subsistence farmers learn the techniques and philosophy behind the different agricultural practices while also learning how to share their knowledge with other subsistence farmers. Through this process, they become ecological agriculturalists, community leaders, and educators. Karen Inwood writes:

We train leaders of poor rural communities to use permaculture as a tool in sustainable community development. We raise awareness of the environmental problems, their causes and solutions, and teach them how to design their plots of land and their communities according to permaculture principles. IPES works with a grass roots network of subsistence farmers who are changing their farming practices and adopting ecological methods. We provide training in soil and water conservation, making organic composts, herbicides and pesticides, native seed saving, crop diversification and reforestation. Members of the network exchange experience and seeds. (Holmgren, 2007).

During an interview, Inwood further explains their work during an interview:

Our project is about education, training and changing your practices. And we will be with you for the long term, helping you in any way that we can, other than material projects. Our work looks very different than other permaculture institutes. Because all we care about is that people are farming in a more natural way. Protecting the land from erosion, and reforestation, and having a better diet, and better quality of life... Whatever it takes that will actually work, we will constantly be evaluating and changing what we are teaching until we get something that we know that will work in the communities and that people can actually do within their resources. (personal communication, June 22, 2006)

By combining local culture as well as environmental and social concerns, IPES educates communities about an alternative to neoliberalism and industrialization. Their philosophy cares for both the earth and the rural poor by mimicking nature while maximizing production through ecological means. They have regular evaluations with the promoters and the communities in order to adapt their education with what has proven successful or failed.

In the next two years, IPES intends to accomplish the following goals:

- ❖ Train 33 communities in ecological agriculture
- ❖ Support 1,000 people practicing ecological methods of farming
- ❖ Educate 500 families about improved nutrition
- ❖ Involve 18 new communities in the Farmer to Farmer Movement
- ❖ Train 500 women in the production of healthy and diverse food, natural household products, and appropriate technology
- ❖ Support women's organizations in 33 communities
- ❖ Facilitate and support demonstration permaculture and ecological agriculture sites in 33 communities, which aid in the promotion of ecological agriculture
- ❖ Support improved organization in 33 communities and raise their ability to develop relationships of co-operation with development agencies
(Inwood, 2005)

Conclusion:

Today, permaculture has a foothold in El Salvador and, given care and support, it can transform the agricultural, cultural, and economic landscape. Sustainability is an obtainable goal for many Salvadorans. However, community development work is a long, slow process. By training communities in ecological agriculture, these communities serve as a good example to others. By training communities in leadership and training skills, they are also efficiently sharing their knowledge and leading others. This type of education will accelerate as more communities participate and more promoters are trained. In a land of diminishing resources, this knowledge is more important than ever. IPES is a small sustainable community development organization that has effectively combined the philosophy of permaculture with the strengths of the local climate and culture while addressing current concerns. The following chapters explain how the work of IPES is appropriate to the Salvadoran land and people, currently and historically.

CHAPTER TWO: EARTH CARE THE ENVIRONMENT IN EL SALVADOR

When the last river has dried up...

When the last tree is cut down...

When there are no more fish to eat...

Then you will realize that you cannot eat money!

~Indigenous knowledge. Organization for Municipal Development of El Salvador

This chapter explains the environmental situation in El Salvador, emphasizing the degradation and the immediate need to care for the earth. Salvadorans persevere through frequent natural disasters, pollution, and deforestation. The government is moving forward with industrialization and moving away from agriculture. Any recommendation for a sustainable alternative to industrialization must first consider the current conditions and environmental problems. An alternative must also consider how the country arrived at the state of severe degradation it now faces. This is largely due to the history of cash crops and exploitation. Ecological practices will aid the environment and people, but it is a long and slow process that requires years to implement; emphasizing the importance and urgency for an alternative to spread throughout the country.

El Salvador is located in the tropics and agriculture is logical for this region, but there are contrasting approaches to agriculture. I explain how conventional agriculture, which relies on man-made approaches, contradicts nature. In contrast, ecological practices mimic nature, increase productivity and support native species while decreasing toxins, debt, and environmental vulnerability. I explain the principle of earth care and the increasing importance of this philosophy in El Salvador. I argue that the ecological work of the Permaculture Institute of El Salvador (IPES) is a viable and sustainable option for the rural poor and one that will care for the earth on which they depend for survival. The techniques described in Earth Care supports the natural environment while providing for

the local needs. This chapter explains how ecological agriculture is an alternative to industrialization for the rural poor in order to maintain and thrive in their traditional agricultural lifestyle.

The Environment of El Salvador



Figure 2:1 Map of El Salvador
http://www.lib.utexas.edu/maps/americas/el_salvador.gif

El Salvador is a country of extreme opposites. Within the landscape, there are beautiful beaches, tropical forests, and huge volcanoes accompanied by widespread deforestation, common natural disasters and pollution. Another noticeable contradiction is the developed, metropolitan appearance in the capital and parts of the other large cities compared to the countryside. While developers construct mega-malls and eight-lane

highways in a desire to create an industrialized society and for San Salvador to become Central America's *centro de comercio* (commercial center), many communities suffer from lack of basic services, decreasing water supplies, and environmental pollution. There are also polarized opinions about the future of the country and land use. Some believe El Salvador needs further industrialization and to move away from their agricultural past. Others believe a continuation in these policies will lead to the complete destruction of the culture and land, and increase their vulnerability to environmental disasters.

El Salvador is a beautiful tropical country located in the lush region of Central America. It is the only country in Central America that does not border the Caribbean; however, it does contain 320 kilometers of gorgeous Pacific coastline. The entire country is roughly equivalent to the size of Massachusetts, making it the smallest country on the American mainland. El Salvador is a country infamous for environmental problems, which include soil erosion, pollution, deforestation, and species extinction, as well as a dense population that compounds the situation. The 2004 Annual Report for IPES concludes,

Only 25 percent of the rural population has access to potable water and 12 thousand children a year die from gastro-intestinal causes. The water table in the capital city is dropping more than 1 meter a year. Today, 95 percent of our rivers are polluted. Each year pesticides banned in the north, but imported into El Salvador kill thousands of people. Every week a child dies poisoned by agrochemicals and many more are left with incurable illnesses.

(Inwood, 2004a, p. 3)

According to Ricardo Navarro in *El Pensamiento Ecologista* (1992), up to 75 percent of the original fertile topsoil has eroded, affecting 80 percent of the land in the country.

Widespread soil contamination from toxic waste and agrochemicals, and slash and burn

farming contribute to erosion problems. Meanwhile, the water table is also dropping one meter a year near the capital.

The climate and soil types indicate that the country was once completely covered by forests. Currently, it is estimated that only 8 percent of the country remains forested while less than 2 percent is primary forest, and protected areas consist of only 0.5 percent of the country's total land area (Hecht, Kandel, Gomes, Cuellar & Rosa, 2005a). An additional 9 percent of the land is coffee *fincas*, or plantations, that retain canopy trees for shade and protection, and contribute to the wildlife habitat. However, due to the decrease in global coffee prices, many farmers now choose to cut down the coffee bushes in order to plant staple food crops. This removes that habitat for wildlife because conventional agriculture relies on a monoculture system, removing the canopy trees.



Figure 2:2

Volcano of San Miguel, El Salvador
Photographer: Robyn Wilson

Because of the significant elevation variance and its location on the Central American land bridge, El Salvador has rich biological diversity including over five hundred species of birds, nine hundred species of butterflies, over eight hundred species of trees, and eight hundred species of fish (MARN, 1997). Among the many habitats found in the country there are mangrove forests, swamp forests, tropical dry forests, freshwater lagoons, pine and oak forests, and cloud forests. This high level of

biodiversity creates an ecological situation that demands urgent attention for the survival of hundreds of species, and many are already feared extinct. The largest threats to biodiversity are habitat loss and degradation, species extraction for human consumption and pet trade, and the introduction of alien species that mainly affect aquatic fauna (MARN, 1997).

Natural Disasters

El Salvador experiences frequent and occasionally violent earthquakes and volcanic activity, as well as tropical storms and hurricanes resulting in widespread flooding, landslides, and detrimental erosion. The U.S. Department of State explains the most devastating natural disasters:

Lying on the Pacific's earthquake-prone Ring of Fire and at latitudes plagued by hurricanes, El Salvador's history is a litany of catastrophe, including the Great Hurricane of 1780 that killed 22,000 in Central America and earthquakes in 1854 and 1917 that devastated El Salvador and destroyed most of the capital city. More recently, an October 1986 [San Salvador] earthquake killed 1,400 and seriously damaged the nation's infrastructure; in 1998, Hurricane Mitch killed 10,000 in the region, although El Salvador suffered less than Honduras and Nicaragua. Major earthquakes in January and February of 2001 took another 1,000 lives and left thousands more homeless and jobless. El Salvador's largest volcano, Santa Ana, erupted in October 2005, spewing tons of sulfuric gas, ash, and rock on surrounding communities and coffee plantations and killing two people and permanently displaced 5,000. Also in October 2005, Hurricane Stan unleashed heavy rains that caused flooding throughout El Salvador. In all, the flooding caused 67 deaths, and more than 50,000 people were evacuated at some point during the crisis. Damages from the storm were estimated at \$355.6 million. (United States Department of State, 2007)

Although these disasters cause continual setbacks, in permaculture obstacles are viewed as opportunities. The frequent disturbance of the natural disasters can provide an opportunity to replace the destruction with sustainable landscapes because the practices of Earth Care would mitigate some of the destruction in the future. This would provide

for the needs of the people and create an area that could better withstand the consequences the natural disasters.

Eric Holt-Gimenez (1998) examined croplands after Hurricane Mitch, which dumped roughly two meters of rain in one week. In the article, *Crisis or Sustainability?*, he states that Hurricane Mitch was potentially the worst natural disaster ever to hit Central America. This is not because it is the first storm of this magnitude to hit the region, but rather unsustainable farming methods made it unable to manage the inundation. A team studied the differences between the farms that engaged in conventional versus ecological farming techniques throughout Honduras, Guatemala, and Nicaragua. In all three countries, the results indicated that the ecologically farmed plots retained more topsoil, more field moisture, and more vegetation than conventionally farmed fields. Landslides and erosion were significantly less likely on ecological plots. Older ecological farms of 10 years or more fared the best. This natural disaster resulted in scientific data that proves Care for the Earth through ecological farming techniques leaves the land more resilient to natural disasters than conventional farming techniques.

Current Agricultural Conditions in El Salvador

Located in the tropics with rich volcanic soil, El Salvador contains some of the best agricultural conditions in the world; however five hundred years of imperialism and military-supported oligarchies left much of the land deforested and saturated with agrochemicals. Due to the location, topography, volcanic soil and climate, El Salvador has historically been an extremely productive agricultural region. The average annual rainfall is 72 inches with a distinct rainy season from May to October, providing six

months of typically reliable rain for crops. Close to 80 percent of the total land is considered permanent crop and pasture land. The main agricultural products are coffee, sugar, corn, rice beans, oilseed, cotton, sorghum, shrimp, beef, and dairy (Diario de Hoy, 2007). Some of the many fruits include mango, papaya, almond, cashew, orange, lime, avocado, pineapple, numerous varieties of banana, and many fruits not familiar in the United States.



Figure 2:3

Hill-side agriculture.
Morazán, El Salvador.
Photograph provided by
IPES

The Salvadoran government wants to modernize the country through industrialization, instead of the traditional agricultural based economy. It is understood that the environment is severely damaged, and not as productive as it once was. However, industrial development and investment will not rehabilitate the land, provide for the native species, or care for the people who depend on it. The agricultural sector has seen a drastic decrease in economic value in recent years, mainly due to the less expensive imported food from the United States. According to the World Bank At-A-Glance report for El Salvador (2006), 10.7 percent of GDP was agricultural products in 2005, down from 14.5 percent in 1995. Agricultural imports increased from \$211 million in 1985 to \$1.639 billion in 2005. This is a 775 percent increase of food imports in a

twenty-year span. From 1990-1997, the production of traditional crops including maize, beans, sorghum, and rice declined an average of 17 percent (Hecht et al., 2005a). This indicates that the farmers are losing the local market for their agricultural products. Part of the reason for this is because the U.S. spends billions of dollars in agricultural subsidies and tariffs to protect their farmers, but forbids other countries to do the same. Tariffs are also placed on food imported to the United States. During a press conference in Brazil on March 9, 2007, President Bush stated that there would be no discussion about import tariffs put on Brazilian ethanol until 2009 when the law expires (Greene, 2007). These protectionism practices violate World Trade Organization (WTO) trade laws. For more information on Free Trade Agreements, please see Appendix B.

The country is rapidly decreasing domestic food production while increasing their dependence on food imports and donations. Because 75 percent of the agricultural population lives on 8.5 acres of land or less, the dissolving domestic market for their products ensures that they rely solely on the food they produce to feed their families or they are forced to leave their agricultural lifestyle to find an income in order to buy food (Hecht et al., 2005a). Due to these concerns, a highly productive, low cost, and sustainable alternative is necessary. Permaculture techniques address these concerns and can improve the living conditions of subsistence farmers and the land they tend by creating an organic and nutritious food supply, protecting the land from further erosion and degradation, and freeing the farmers from external debt.

The Setting of Revolution: Cash Crops and Exploitation

It is difficult to imagine how a country arrives at an environmental emergency, such as what El Salvador faces. The following history of the land will demonstrate a pattern of exploitation, as well as the need for an alternative that provides care for the earth¹. It shows the movement of land from public and community ownership to private, large landowners. This history is important when discussing alternative solutions for the degraded land because these must be based on the local culture and climate.

Spanish colonialism, powerful governing oligarchies, incomprehensible poverty, unjust income distribution, and systematic violence plague Salvadoran history. Mimicking the story of other Latin American countries, the rich and powerful minority severely exploited the majority of the population and the land. Refusing to compromise, they held onto their profit and power with tremendous cruelty causing environmental catastrophes, enormous suffering and loss of human life. The consequences of this greed on the marginalized populations are explained in the next chapter.

Cash crops: Indigo and Coffee

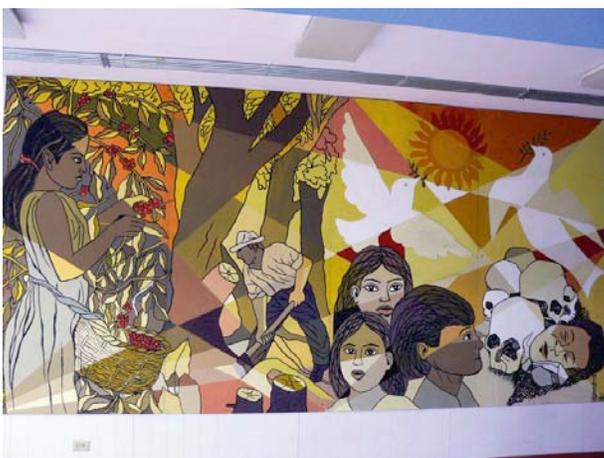


Figure 2:4

Mural: Coffee plantation (artist unknown)

Photographer: Robyn Wilson

¹ Appendix C: Timeline of El Salvador

Before the Spanish conquest, what is now El Salvador consisted of both Pipil and Lenca. Their main agricultural produce consisted of corn, beans and squash, as well as native fruits (Peterson, 1997). Originally, the Spanish allowed the indigenous to live on the land and grow staple crops, as long as they produced cacao and balsam for the international market. With the rise of the textile industry and increasing number of uniformed European soldiers, the world market demanded dyes in the late 1800's. Indigo and cotton production expanded and the Spaniards realized their need to control the land as well as the labor. Private plantations grew in size and number, which were owned by European international traders (Armstrong & Shenk, 1971).

El Salvador gained its independence in 1821 from Spain, and from the *República Federal de Centroamérica* in 1840. The process of homegrown oligarchic economic, military, and political control of the country began to take hold in 1842. Coffee production grew dramatically which changed the nature of cash crops and agriculture in El Salvador. Indigo did not require high labor input, but coffee depends on specific environmental factors, and hundreds of laborers (Armstrong et al.).

Exploitation

In 1881, the government decreed that all public land, which included communal land that endured hundreds of years of colonial rule, would no longer exist. All land was sold to wealthy families and the dispossessed were forced to work as day laborers on the new coffee plantations. Coffee required the most fertile soil, which was also where the population was the densest, therefore threatening the traditional rights of the communities (Peterson, 1997). Agricultural judges created new laws that permitted landowners to evict squatters, forcing them to rent land or wander homeless. New vagrancy laws forced all

peasants to carry a card determining which plantation owned them. Without a card, they were assigned a plantation and forced into coffee production (Armstrong et al., 1971). A public relations release in 1916 boasted of the new agricultural system and demonstrates the extent of the deforestation and lack of natural reserves:

One of the great obstacles that our agriculture was confronted with was the deplorable system under which the national land was divided into *ejidos* and *tierras comunales*, which caused land and labor to remain unused....now the landscape presents to the traveler a scene similar to a vast chessboard where the various products of the fertile land may be admired; from the highest peaks to the beautiful valleys and plains, Salvador presents a view that reminds us of a large and well-kept garden, with every available piece of land being under cultivation. (Armstrong et al., 6)

By 1931, coffee represented 95.5 percent of all exports (Browning, 1971). Cotton and sugar cane production also expanded, occupying the only remaining land along the coast. This land was previously available to the landless subsistence farmers. The haciendas cleared forests in order to utilize all of the land possible, and the landless poor found themselves in a desperate situation. The cotton and sugar cane colonization of the coastal plain was a success, in commercial terms. However, these coastal-haciendas required less human labor and soaked the land with agrochemicals for abundant crops (Navarro, 1992). The situation left the landless with the option of either entering a contractual rental agreement or illegally squatting on land that was so marginal the landowners chose not to utilize it. The transformation of publicly to privately owned land was then complete.



Figure 2:5

Example of the “chessboard of the well-kept garden”. Also visible is the altered path of the Jiboa River due to flooding during Tropical Storm Stan in October, 2005.

San Pedro Masahuat, La Paz, El Salvador
Photographer: Robyn Wilson

As the traveler flies over El Salvador today, they first see a strikingly beautiful land with huge volcanoes and endless beaches. However, a closer look reveals the “chessboard” of the “well-kept garden”. It is noticeably deforested and covered with agricultural production. The above description could have been written about the land today, almost one hundred years later. It is important to understand that systematic, large-scale agriculture has left very little natural habitat. Many of the environmental and social problems that the country now faces are directly due to the oligarchy’s insatiable cultivation of the land, compounded by conventional agricultural practices. A continuation of these practices will no doubt lead to further environmental degradation.

Land Distribution

In 1931, Arturo Araujo was elected president on the campaign promise of a land distribution program but he failed to bring about change. This, combined with the failing global economy of the 1929 Great Depression leading to the collapse of coffee prices, and the increasing population created a desperate situation for the poor.

Farabundo Martí led the first communist uprising in Latin America in 1932, fighting for human rights and land. The rebellion was violently squashed, now known as *La Matanza* (The Massacre). However, the oligarchy took the apparent rural discontent seriously (Browning, 1971). The government implemented several reforms, which included a special fund, Fondo de Mejoramiento Social, which was created for distribution of low-income housing, the development of general industrialization, and land redistribution. Browning states, “Between 1932 and 1950, the government purchased a total of twenty-six haciendas, comprising 86,754 acres, or two percent of the country’s total area, and distributed 73,655 of these to peasant farmers,” (p. 275). Realization of the large number of poor demanding land, combined with the inability to obtain enough farmland from the oligarchy families, resulted in much smaller plots for the subsistence farmers. This created even more unrest among the poor, which persisted until the inevitable civil war began in 1980. The time period before and during the civil war in regard to the actions of the rural population is explained in Chapter Three.

Peace Accords

The war continued from 1980 to 1992, costing an estimated 75,000 lives and leaving the country in shambles. Agriculture was the hardest hit economic sector during the recent civil war. This was due to several reasons including mass migration from the war-torn countryside to urban centers and other countries, decreased exportation capacity, and the systematic destruction of farmland and livestock, also known as the scorched earth program (Weinberg, 1997).

The war ended in 1992 when the conservative *Alianza Republicana Nacional (ARENA)*² government and the progressive *Frente de Farabundo Marti para la Liberacion Nacional (FMLN)*³ signed a treaty that provided for military and political reforms. Provisions of the Peace Accords included the reduction of the Armed Forces, dissolution of the Death Squads, creation of the National Civil Police, electoral reform for fair elections, transfer of land to combatants of both sides, a plan for national reconstruction, a plan for a social welfare system, creation of *Foro de Concertación Económico Social*⁴, political participation of the FMLN, and the end of the armed conflict (Lopez, 2002).

According to the Peace Accords, the Land Transfer Program was established in order to provide ex-combatants with agricultural plots. Though it took several years, about 35,000 families received land, which equates to about 3 percent of the total population. There had also been an on-going Transfer Program of the 1980's, which was designed to dilute the opposition among the landless peasants and to break up the strength of the agricultural cooperatives. The combination of the Land Transfer Programs of the 1980s and 1990s redistributed about 30 percent of the country's total land area; however only 5 percent of this is arable farmland (Foley, 1997; Weinberg, 1997). Only a fraction of the population has benefited from the land distribution process (Foley). Even though the government distributed land therefore decreasing the amount of landless peasants, the conditions of the rural poor did not substantially change. Foley writes that many of the small farmers, and those who did not receive land, still depend on seasonal positions on

²ARENA: National Republic Alliance

³FMLN: Farabundo Marti for National Liberation Front

⁴Forum of Social Economic Compromise

large farms or rent small plots. This means there is still a large portion of the Salvadoran population who are landless. The lack of legal land titles is an issue that requires immediate attention for land security.

El Salvador is a country with the highest population density on the American mainland. It is often used as an example as a country that cannot support their increasing population. However, in *Scarcity and Survival in Central America*, William Durham (1979) explains alternatives to the Malthusian interpretation of food and land shortages in El Salvador.

...when we compare the production figures for all principal crops (food crops plus exports) with the population increases for the period 1935-71, we see that total agricultural production has stayed pretty much abreast of population growth. This finding has two important implications. First, it suggests that the population-food imbalance that developed in the 1950s and 1960s was not simply the result of agricultural expansion to some physical limit. That total production kept pace while the food supply did not clearly implies that land-use practices and production priorities were factors in the imbalance. Second, it suggests that large increases in export production were realized in the face of growing food shortages themselves – large enough in fact to compensate statistically for the food shortages themselves. (p.30)

These findings indicate that the food crops have less priority than more profitable export crops (Durham). El Salvador has the potential to produce the majority of required food for their population if the government properly distributed the arable land for food production, supported urban agriculture, and provided appropriate training (FAO, 2004). It is possible, but the government must find value in food security, and make policies that support it. Unfortunately, El Salvador is moving away from agriculture towards industrialization and international trade. The changing economy is further explained in Chapter Four.

Industrial (Conventional) Agriculture

James Horne and Maura McDermott in *The Next Green Revolution* (2001) describe the rise of industrial agriculture. In the 1950s, industrial agriculture, which is also referred to as conventional agriculture, developed into a highly productive and capital-intensive agricultural model in the United States and Western Europe. It seemed highly effective and spread throughout the world. This type of agriculture depends on monoculture, genetically modified seeds, and petrochemical fertilizers, pesticides, and herbicides in order to maximize production and productivity. These expensive practices are not affordable for farmers. They are then dependant on purchasing foreign fossil fuel products, and in a constant cycle of debt if lending agencies are available. This process is not natural and does not benefit the farmer or the land in the long term. However, it does increase profits for the elite of El Salvador, the multinational corporations, and the global lending agencies, such as The World Bank (Shiva, 1997).

Genetically modified (GM) seeds jeopardize native plants through cross-pollination and remove natural habitat for native species. One concern is the terminator gene that prevents plants from producing productive seeds for future crops. Farmers have saved seeds for future production since agriculture began around 10,000 years ago. This has the potential of a complete agricultural collapse if these GM plants cross-pollinate with local (heirloom) crops, preventing them from creating fertile seeds, even further threatening biodiversity. According to the United Nations Food and Agriculture Organization, about 75 percent of the genetic diversity of agricultural crops has already been lost (Shand, 1997). “Genetic diversity is necessary insurance for the future-against changes in climate such as possible with global warming, evolving pests and diseases,

and changes in the availability of energy, along with changes in fashion, markets, and the structure of agriculture,” (Horne & McDermott, 2001, p. 16).

The seeds are laboratory-created by blending DNA strands, which has a plethora of health and environmental concerns, but it is too soon to know the true consequences of changing plant DNA. GM seeds require the purchase of chemical fertilizers, pesticides and herbicides. These agro-chemicals, derived from natural gas and oil, kill the micro-organisms in the soil and leave it even more susceptible to erosion. Within a few years, the farmer is forced to move to a different parcel of land due to greatly reduced productivity (Shiva, 1997; Inwood, 2004b; Molison, 1990; Holmgren, 2002). Eric Holt-Gimenez (1998) describes the impact of conventional agriculture on the land in Mesoamerica:

Human impact on the isthmus over the last century transformed the original, heavily forested landscape into a widely intervened patchwork of open fields bordered and dotted by groves of trees. Pre-Colombian, slash and burn rotational systems were converted from small, cultivated plots with extensive areas of forested fallow, to intensively farmed, non-rotational systems. Agriculture reduced the ecological succession of the region from multi-storied, high and medium canopy cover, to ecosystems made up of low-lying broadleaf plants, grasses, and bare soil. The ecological effect of this transformation was an overwhelming shift in the primary store of nutrients from the biomass (trees), to the soil. This shift in the nutrient store, and the corresponding disappearance of the rich litter layer in these tropical ecosystems, was accompanied by a dramatic reduction in the levels of nutrients held in these ecosystems. (p. 6)

The impact on El Salvador is further explained in the 2004 IPES Annual Report:

More than 75% of the soil has been severely affected by erosion. Erosion depletes 20% of the country's topsoil every year and has left much of the land useless. Farmland is only half as productive as it was 30 years ago. Most agricultural soil has been acidified due to the irrational use of inorganic fertilizers, pesticides, acid rain and other forms of pollution...These farmers use the slash and burn method, destroying all vegetation, followed by the liberal application of toxic weed killers and pesticides. The majority of the farmers are illiterate and unable to read the health warnings provided with these toxic chemicals. They take no protective measures and wash their spraying equipment in the local rivers, which supply their communities

with water. These farmers rely on hybrid seeds for their staple food of maize and beans which demand high levels of inorganic fertilizers and pesticides and which are difficult to reproduce. Local varieties of seed have been lost. We have calculated that the average farmer needs to invest over \$345 in agrochemicals and hybrid seeds [per acre], representing perhaps half of their annual income. This method of farming ensures that they never rise above the level of mere subsistence. Added to this their land is rapidly degrading, demanding more and more agrochemicals at ever increasing costs. Eventually, the farmer abandons the land and starts this destructive method of farming elsewhere. (Inwood, 2004a, p. 5)

A virgin forest in El Salvador includes a large variety of plants, which supplies the needed nutrients, as well as carbon and moisture. Historical clear-cut methods on large areas of land have destroyed the natural balance. The environmental problems that now face El Salvador can be directly traced to monoculture crops and the introduction of agro-chemicals that kill microorganisms in the soil, coupled with the exploitive use of the land. The result is soil that loses almost all of its productivity, which is why farmers are then forced to clear a new plot of land and start the destructive process over. This is not sustainable for El Salvador. Their practices must change in order to support the environment instead of destroy it. There is no other option than to become ecological farmers if they want to continue practicing their traditional agricultural way of life.

Earth Care

Earth Care is the first ethical principle of permaculture. This highlights the values living soil, stewardship and responsibility, biodiversity, and the value of all living things. In *Gaia: A New Look at Life on Earth*, James Lovelock and Lynn Margulis (1979) explain the Gaia hypothesis and the need for the values listed above. It describes the earth as a self-organized system that functions as a single organism. It concludes that if balance of the earth's system is disturbed, it will self-regulate and "neutralize" in order to maintain itself for the greater good of the organism. The Gaia hypothesis has also

revived the indigenous belief that the earth is our living and powerful mother. David Holmgren offers a similar explanation “Care for the earth in this global context is not only due to ethical restraint and respect but also to fear of motherly rejection and annihilation,” (Holmgren, 2002, p. 4).

Such annihilation is not improbable. Global warming, desertification, species loss, and other crises have alerted people worldwide to the urgent need for humans to improve their understanding and interactions with the earth. Industrialized countries, especially the United States, are greatly contributing to the problems of fossil fuel extraction and use, pollution, and production of waste. El Salvador is a country where the consequences are more apparent than they are in many others. Its small size, high population density, widespread poverty, clear cut farming methods, cash crops, history of social exploitation, and unregulated air, water and land pollution make it a high profile example of a land in crisis.

However, permaculture practitioners view obstacles as opportunities. As David Holmgren (2002) writes, “The permaculture approach is to focus on the positives, the opportunities that exist even in the most desperate situation. The successful use of permaculture strategies in helping urban and rural poor in the Third World to become more self-reliant is partly a result of this focus on opportunities rather than obstacles,” (p. 6). Ironically, this dramatic environmental situation combined with the dedicated and intelligent people creates the opportunity to develop an attractive alternative for improving the environment and people’s quality of life. The techniques utilized in permaculture works well on small plots of land as well as large acreage. Therefore, it is a good system for subsistence farmers who must produce a variety of nutritious foods and

medicinal plants for their family on a very small area of land. Applying permaculture principles will not solve all environmental problems for the country, but in time it will improve the environmental conditions for those who choose to practice them.

Ecological Agriculture and Earth Care

The ethical principle of Earth Care incorporates numerous topics, strategies, and techniques that promote living soil, stewardship, and biodiversity. Living soil is the evolutionary basis for terrestrial life. Carelessly used and degraded soil has resulted in a rapid decrease of its ability to support life. Stewardship is our ethical responsibility for taking good care of this life and other resources. Biodiversity is the recognition of the value of all life forms on earth and our responsibility to that variety. It is a respect for all forms of life, regardless of their apparent function. It views all parts of the living earth as necessary for all other life on earth. Earth care explains ways to meet our needs while allowing other life to meet their needs. Specifically, ecological agriculture practices include, but are not limited to:

- ❖ Closed flows of nutrients and organic matter within the farm
- ❖ Maintenance and improvement of soil fertility
- ❖ Mixed livestock and arable farming
- ❖ Use of farm compost, mulches and green manure
- ❖ Recycling and composting of vegetative matter
- ❖ Use of crop rotation, fallows and strip cropping
- ❖ Use of nitrogen-fixing plants
- ❖ Mixed cropping to maintain soil cover and maximize nutrient availability
- ❖ Use of deep-rooting plants to recycle nutrients
- ❖ Agro-forestry
- ❖ Use of contour bunds, terracing and other methods to prevent soil loss
- ❖ Pest and disease control
- ❖ Companion planting
- ❖ Use of resistant varieties
- ❖ Use of allopathic / antagonistic plants
- ❖ Use of physical barriers
- ❖ Use of natural pesticides

- ❖ Use of biological controls, such as predators
 - ❖ Hand picking
- (Parrott & Marsden, 2002)

The goal is to create productive agricultural plots that mimic nature and utilizes the resources readily available on the land, without the use of harsh chemicals.

Changing Agriculture in El Salvador

Ecological agriculture was practiced in El Salvador for millennium before the Green Revolution in the 1950s. Agronomists, non-profit organizations, and government programs encouraged the spread of capital-intensive techniques throughout the world, with good intentions. Farmers in El Salvador told me that they remember fifty years ago when their grandfathers farmed using their own seeds, without chemical additives. They could remember integrated crops, and consistently stable production. However, they said that all of this knowledge is now lost. Just about everyone switched to conventional farming through government persuasion and market demand. They need to relearn how to farm ecologically because of the amount of time that has passed. Also, the ecological techniques are more refined and effective than what was practiced before. Conventional agriculture is the most common system of farming currently practiced in El Salvador; however, a growing number of farmers and organizations realize the need for an alternative and are turning to sustainable, ecological, and locally supported agriculture.

When I was a volunteer in 2001, I participated in several meetings for ecological agriculture in San Pedro Masahuat, La Paz. During the first meeting, the facilitator asked the farmers about their production levels. Everyone in the room began to complain about diminishing production. They said they can no longer buy enough chemical fertilizer to produce previous levels, and the weeds and plagues have adapted to the

herbicide and pesticide. They described that they have switched plots of land to see if crop rotation would work. But when they return to the chemically enhanced plot, it is just as unproductive as before.

Although the land has suffered greatly under these unnatural conditions, it is possible for the farmers to change their practices and rehabilitate the land. Julian, another founding member of IPES with ten years of ecological farming to date, explained to me the process of rehabilitating land after chemical use.

Si, había [químicos aquí]. Para empezar de dar frutos esperaba tres años. Para ya fortalecer la tierra, tres años. En los dos años, va a ver frutos pero no crecen. Tres a cinco años, sí. Y es mucho mejor que químicos. En cinco años tiene una cosecha mil veces mejor que con químicos. Yo...me siento muy contento con este trabajo. Es excelente...Produzco bastante para dar comida a mi familia por todo el año, para sembrar el próximo, y para vender en la comunidad.⁵

Leoncio is an ecological farmer in Morazan, a founding member, promoter, and on the board of directors of IPES. He received land through the Peace Accords. His son Rejino is also a promoter and together they work roughly ten acres of land. Juan Rojas explained how permaculture concepts have worked for Leoncio during our visit to his plot of land: (personal communication, June 28, 2006)

He chose to develop this land with permaculture method. And what he is talking about is history in 1996, when he started with a group of us, working on the way permaculture could develop in this country. Because, as you know, permaculture is a concept that developed in Australia but can be applied anywhere else; it doesn't matter the soil or the culture as long as you adapt it to the reality where you live. In this case, we started to discuss what is the best way to introduce [permaculture strategies] here. He has been experimenting permaculture in his own understanding on this plot. So what you see is permaculture, but according to him. But if you see the principles, they are embedded in many things. Diversifying fruit trees. Terracing

⁵ Translation: Yes there were [chemicals used on this land]. In order to produce food, I waited three years. In order to strengthen the land, three years. In the first couple of years, you will see fruits, but they don't grow. In three to five years, they do. And it is much better than those with chemicals. In five years, you have a crop that is 1,000 times better than it would be with chemicals. I feel very happy with this work. It is excellent. I produce enough to feed my family for the year, seeds to plant the next year, and to sell in the community.

with stones, lemon grass and ginger, because ginger has a price on the market. Cinnamon, corn... on this 6 by 8 meter area, you can find 20 kinds of plants between herbs, vegetables, bushes and fruit trees. That is permaculture according to Leoncio. He is a native farmer of this area; it wasn't difficult for him to learn. Now he supports the environment and his family in a healthy and sustainable way.

Leoncio and Julian are two of many farmers that chose to break free from the destructive cycle of conventional and industrial agriculture. They are empowered by their ability to provide for their family, and increase the diversity and stability of their land. Ecological farmers support their families with the nutritious and diverse fruits and vegetables they produce using the resources found on their own land. They are able to select the best seeds for production for the next season, and sell excess to their neighbors. These farmers are not forced to go into debt in a repeated cycle that leaves them incapable of escaping extreme poverty.

Conventional verses Ecological Agriculture: Costs and Advantages

During an interview and tour of a rural farmer's ecologically managed field, Juan Rojas explained the difference in investment between conventional and ecological farming (personal communication, June 29, 2006). Juan stated that one *manzana* (1.7 acres) of *maizal* (a mono-cropped corn field) for the first year now costs about \$500 in agrochemicals and another \$400 in labor. So each *manzana* requires the investment of about \$900 for the first year of *maizal*. The second year, *maizal* and the conventional method requires more agrochemicals and investment due to diminishing soil quality. The third year *maizal* requires even more agrochemicals and investment. By the fourth year, the *maizal* needs twice as much agrochemical as it did the first year. This means that in four years, the farmer must buy approximately \$1000 worth of inorganic fertilizer, herbicide and pesticide as well as labor in order to produce a monoculture crop of corn.

Eventually, the agrochemicals will completely destroy the land and the farmer will have no choice but to move to a new plot because of decreasing productivity. In a country the size of Massachusetts, there is little unused land left for farmers.

Meanwhile, the ecological agriculture field of *milpa* (a field planted with the combination of bean, squash and corn) also has costs. The first year is very labor intensive and therefore costs about the same as the conventional *manzana*. The second year is also labor intensive but the amount of labor does diminish each year, and production of perennials increases without labor. Juan Rojas said:

*El campesino empieza a gastar menos porque la tierra necesita menos atención, porque el suelo está rehabilitado. El agricultor no trabaja tanto con la mala hierba porque está más suavcita, la semilla ya está mejorada. Empieza a bajar costos por el agro-ecológico pero del convencional ha doblado. La ganancia es que come más limpio, produce una cantidad igual a la convencional pero la tierra está saludable y incrementa la producción. También está cosechando las tres hermanas, no solamente maíz.*⁶ (personal communication, June 30, 2006)

Additionally, Rejino, a permaculture promoter and the son of one of the founding permaculture farmers, spoke of another benefit of ecological agriculture. He said, “*Otra ventaja ecológica es que es auto-sostenible. Decía que siembra plantas perennes que no necesitan mucho trabajo después el primer año y dan frutos para comer, vender y regalar a los vecinos por años.*”⁷ To set up a permaculture plot with ecological agriculture techniques, more work is required in the beginning years. As time goes on,

⁶ Translation: The farmer starts to spend less because the land needs less attention, because the soil is rehabilitated. The farmer doesn't work as much with weeds because it is easier to cut, [through selection] the seeds are improved. Costs begin to decrease for ecological farming but those of conventional have doubled. The profit lies in eating clean food, you produce the same amount as conventional but the land is healthy, and you increase your production [over time]. Also, you are producing the three sisters [corn, beans and squash] not only corn.

⁷ Translation: Another advantage of ecological agriculture is that it is self-sustaining. This means that you plant perennials that do not require much additional work after the first year and they produce fruit to eat, sell or give to neighbors for years.

the work becomes less and the production increases due to rehabilitated soil, perennials, and overall care for the earth, restoring it back to a more natural state. Because it requires several years of investment in time and labor, some farmers are weary of these new methods. However, coffee requires four years to produce after it has been planted and many farmers have made this investment in the past. It can be done again and the benefits far out weigh the reality of conventional farming.

Conclusion

This chapter describes the environmental situation of El Salvador as it has fallen victim to greed and exploitation. Subsistence farmers continue to create further environmental degradation deriving from extreme poverty, a lack of education of sustainable methods, and a lack of resources. Along with Haiti, El Salvador suffers from the worst environmental problems in America. As Juan Rojas stated during an interview at his house (personal communication, June 21, 2006), “It is urgent. It is a matter of survival. You’ve come to a point of urgency for the survival of everything alive in El Salvador. We must act now for the sake of life in general.”

Permaculture practices have proven successful in restoring the environment and providing healthy solutions without the use of external additives. This frees the farmers from dependence on foreign chemical additives, from a constant cycle of debt, and from destroying the land they depend on for survival. Ecologically managed plots have restored fields in as little as four years to recreate self-sustaining, productive land. The vision statement of IPES is, “to build a network of ecological communities that act as a beacon of light and hope, both for the people in El Salvador and the rest of the world,” (Inwood, 2005). As communities continue to implement the principles into their own land

and more communities come forward who want to work with IPES, this vision is slowly becoming reality. The practices of Earth Care will increase forested areas, natural habitat, healthy and productive soil, and decrease the amount of agrochemicals contaminating the land and surface water. Permaculture and ecological agriculture can dilute the consequences of five hundred years of exploitation and offer a healthy, sustainable solution for rural families; however, it is a long and slow process. Rehabilitation of El Salvador's environment will require many years of ecological restoration and a nation-wide effort. The length of time required emphasizes the urgent need for this type of development. Each successful community will aid in the spread and acceptance of these practices, and improve the quality of life for those families who choose to engage in sustainable living practices.

CHAPTER THREE: PEOPLE CARE

PEOPLE OF EL SALVADOR

If we don't help each other, who will? ~Juan Rojas (personal communication)

This chapter reflects the current situation and recounts the recent history of the rural poor. Up to 80 percent of all Salvadorans live in poverty, and struggle to provide basic needs for their families (Arias, 2005). Many of the rural agricultural people are losing their traditional lifestyle due to a diminishing market for their crops, or their land has become too inefficient to continue farming. Without an alternative, these families are placed in a position where they need to make money in order to buy food and provide basic needs. Hundreds of thousands have relocated in urban areas in search of jobs, and up to 2.4 million Salvadorans have immigrated to the United States in order to support their families (UNDP, 2005). The pattern of migration causes negative repercussions on the society as well a few benefits. Although there is not one solution for the entire population, alternatives are urgently needed to improve the quality of health, diet, and life for the poor. For the traditional agricultural population who wish to retain this lifestyle, the Permaculture Institute of El Salvador (IPES) can provide them with the tools they need to successfully provide for their families while taking care of the land.

Creating a proposed solution for El Salvador's problems must be based on their local resources, culture, and historical events. For this reason, I discuss the social movements that were accepted in the rural areas since the late 1960s, that might provide glimpses of viable models for social progress. These include liberation theology, popular education, and the Mesoamerican methodology of *Campesino a Campesino* (Farmer to Farmer). Although these three movements are distinct, they are all grassroots community

development philosophies created in Latin America during this time period. I argue that these models of community development and informal education have been very successful approaches historically in El Salvador, and that this success validates the continuation of their use. These are inspiring stories of rural, and typically illiterate people, gaining strength through education, organization, and opportunity. What this illuminates is that Salvadorans are not only capable of learning, leading, and teaching others; they are very effective at it. Even more admirable, is their sense of community and their willingness to work for the common good of all. These traits combined with the principles of permaculture create a powerful recipe for widespread sustainable community development.

This model is evident in how IPES combines permaculture with the *Campesino a Campesino* methodology. Through a series of trainings, and continuous support, IPES encourages people to not only learn to provide and care for their own families in a sustainable and healthy manner, but also how to teach others to provide and care for themselves. I therefore argue that given the historical and cultural attributes of El Salvador's rural poor, IPES is a current manifestation of what this population needs in order to survive within the constraints of the current neoliberal developmental model that values urbanization and industrialization over rural farming and sustainable ecological development. I do not mean to romanticize permaculture as a cure for all of El Salvador's social concerns, because the situation is complex and any community development work is a long and slow process. However, it has proven successful for the rural poor who practice it.

The People of El Salvador



Figure 3.1
Girls from
Morazán.

Photographer:
Robyn Wilson

Just as the land in El Salvador is full of contradictions, so are the people and their history. On one side of the spectrum, this small Central American country holds some of the most generous and hard-working people throughout the region. On the other side of the spectrum, a long colonial history that emphasized repression and *latifundia* continues to plague the country as it grapples with its position in the globalized world. This is most obvious in the urban jungle of San Salvador. There, the disparity between rich and poor is grossly apparent as the city hosts both a modern display of multinational corporations, gated communities, expensive international boutiques, and showrooms of Ferraris and Lamborghinis while crowded slums of metal sheeting and cardboard boxes populate vast neighborhoods. Beyond this coexistence of extreme poverty and ostentatious affluence, decreasing agricultural productivity, and the rising cost of living leave few options for many rural families that continue to struggle. Many migrate to urban slums, or to the “north” (the United States), leaving behind their families, traditional ways of life, and their homeland without the ability to return, unless deported.

The population is an estimated 6.8 million averaging 823.6 people per square mile, making it the most densely populated country in the Americas. By the year 2025,

the population is expected to double (Inwood, 2004b). When the Spanish arrived in 1524 by Pedro de Alvarado it is estimated that 116,000 to 130,000 Pipil, Pokoman, and Lenca people populated *Cuscatlán*, what is now known as El Salvador (Armstrong et al., 1971). It is currently documented that nine out of ten people are *mestizo* (Amerindian and Spanish), one percent Amerindian, and the remaining nine percent are mainly of European and Palestinian descent (Dirección General de Estadística y Censos El Salvador, 2006).

Current Situation

When El Salvador's 12-year civil war ended in 1992, Salvadorans had high hopes for social change after the implementation of the Peace Accords. Yet in 2005, 80 percent of Salvadorans continue to live in poverty and serious social concerns persist (Arias, 2005). Many rural communities lack basic amenities such as drinking water, electricity, education centers, and agricultural training. With small plots of land and a lack of social services, farmers must learn new strategies in order to provide for their families.

While working with doctors from Cuba who came to aid communities affected by the earthquakes in 2001, I experienced how this poverty is perceived from a non-affluent perspective. According to the Cubans, El Salvador's lack of essential services were counterintuitive to what they believed were basic human rights. They said that although they were poor in Cuba, their basic needs were typically met. In fact, comparative demographic statistics indicate that the per capita GDP is very similar between the two countries; however, the statistics for health and education are much different. This table also exposes that a country does not have to be wealthy to provide for their people if that is made a priority. To conceptualize the lack of basic needs in El Salvador, the following

table compares demographic information of El Salvador, Cuba, the United States, and the World average. This will aid in understanding the situation in El Salvador and establish that there is an urgent need for the philosophy of People Care.

Comparative Demographic Statistics (2005) - Table 3.1 (Population, Health, Education, & Economic Factors)				
Description	El Salvador	United States	Cuba	World
Human Development Index 2005**	104	10	52	(177 total countries)
Population density* (pop. per km)	327	31	102	43
Population growth rate* (%)	1.72	.91	.31	1.14
Total fertility rate* children / woman	3.12	2.09	1.66	2.59
Infant mortality rate* /1,000 births	24.6	6.43	6.22	48.87
Life expectancy* Total pop. (years)	71.63	77.85	77.41	64.77
Literacy rate* -pop. over 10 years old	82.8% male 77.7% female	99% total population	97% total population	87% male 77% female
Gross Domestic Product* / capita	\$2,330	\$41,399	\$3,000	\$6,280
Pop. > national poverty line **	48%	12%	N/A	N/A
Net migration rate */ 1,000 pop.	-3.61	3.18	-1.57	N/A

(* CIA World Factbook, 2005)

(** United Nations Human Development Report 2005)

This table illuminates striking differences between health, education, and population statistics. The infant mortality rate and the life expectancy figures provide evidence of insufficient health care in El Salvador, although they are better than the World average. The health care statistics between Cuba and the United States are similar, in fact Cuba has a lower infant mortality rate than their wealthy neighbor. Cuba and the U.S. also have similar literacy rates, indicating high educational standards. El Salvador's

literacy rate is much lower, and these statistics are even lower in the rural areas. In fact, the average Salvadoran education is only 3.3 years (USAID/El Salvador, 2003).

Along with being the most populated country, El Salvador has the highest growth and fertility rates compared to other countries in this chart. This signifies that there will be a growing population living on marginalized land, and that there is a growing need for social services. Around 3 million people, or 48 percent of the country, live below the poverty line (UNDP, 2005). Living in poverty means it is that much harder to obtain basic needs and maintain proper nutrition, unless the government makes social services readily available, or the family is capable of providing for themselves using local resources.



Figure 3.2

Homeless man, his home and fishing cooperative were confiscated.

Costa del Sol, La Paz, El Salvador

Photographer: Robyn Wilson

The Human Development Index calculated by the United Nations Human Development Report is based on factors that include life expectancy, infant mortality rate, literacy, poverty rates and distribution of wealth. In accordance with these statistics, El Salvador ranked 104 out of 177 countries. Meanwhile, Cuba ranked 52, indicating more social services and higher qualities of life. Even though this is not a very impressive ranking for El Salvador, the Human Development Index has risen in the country in the past thirty years from 0.595 to 0.719 (UNDP, 2003). These improvements

can be attributed to various factors. These include the provisions of the Peace Accords in 1992, which expanded basic infrastructure, as well as the redistribution of some land. Also contributing to this was a boom in non-profit organizations that flooded the country after the end of the war. And the other major factor is the billions of dollars in remittances received annually from people who have relocated in the U.S. Although improvements have been made, severe economic, social and environmental problems persist. One of the non-profit organizations with the best philosophy that I have encountered for caring for the rural population in El Salvador is the Permaculture Institute. Their interpretation of the ethic of People Care combines permaculture philosophy with the Salvadoran culture and recent rural social movements to educate others how to utilize their local resources to improve their quality of life.

People Care

The second ethical principle of permaculture is titled People Care, or Care for People. It incorporates self-reliance and community responsibility, allowing everyone access to the resources necessary for existence. In order to maintain and thrive, people require a decent quality of life, including nutritious food, adequate shelter, and clean water. People across cultures want to provide for their families. In my opinion, these are basic human rights and should be obtainable for all people on earth. However, the reality is millions of people suffer from extreme poverty in El Salvador, and elsewhere. People who live in extreme poverty have the opportunity to provide few if any of the basic needs of food, water and shelter that characterize a healthy existence. However, people need to accept personal responsibility for their situation instead of placing blame on external influences and forces (Holmgren, 2002). The ethic of People Care addresses these needs, and more specifically, how to access them utilizing the local culture and resources.

The people care ethic is based on the belief that people must take care of their own needs before they can effectively care for the needs of others. Caring for people is not separate from caring for the earth, but rather a partnership. This emphasizes the reciprocal relationship between the lives of people and their interconnection with life on earth. As stated earlier, permaculture is based on beliefs that the earth is an organism, or a whole system, and that all life is interconnected. Care for People begins with the self, but spirals out to include family, neighbors, and wider communities. Just as any spiral in nature, the most peaceful place is located in the core. In permaculture, the individual is the core. One must be healthy and secure in order to contribute to a wider good. Humans are capable of much more than other species and therefore need to take personal responsibility for the earth and all of its inhabitants. Bill Mollison (1990) wrote:

Humans are thinking beings, with long memories, oral and written records, and the ability to investigate the distant past by applying a variety of techniques from dendrochronology to archaeology, pollen analysis to the geological sciences. It is therefore evident that behaviors in the natural world, which we thought appropriate at one time, later prove to be damaging to our own society in the long-term. Thus, we are led by information, reflection, and careful investigation to moderate, abandon, or forbid certain behaviors and substances that in the long-term threaten our own survival: *we act to survive*. (p. 3)

Humans are a unique species compared to all others in nature and permaculture is a human-centered environmental philosophy. This is due to people's ability to manipulate their surroundings, to think and act far beyond instinct, and to evaluate and alter their behavior. For these reasons, it is necessary for people to take personal responsibility for the care of all life on earth, and modify their actions accordingly.

In rural areas of El Salvador, people's lives are directly related to their environment. In fact, the word *campesino* means a person from the *campo*, or land.

Likewise, there is little separation between Care for the Earth and Care for People. The environmental problems of El Salvador have imposed significant consequences on the population. It is estimated that 44 percent of the population, or close to three million people, live in the rural areas (U.S. Department of State/El Salvador). More than 62 percent of the farmers own less than 2 hectares of land, which totals only 8 percent of the arable land of El Salvador (Jovel, 2005; Inwood, 2004b). Because of a diminishing local agricultural market, due to less expensive imported produce, many are forced to abandon their homes and lifestyle in search of funds to support their families. The land and water is polluted to extreme levels causing thousands of young children die from toxins or curable intestinal diseases (Inwood, 2005). An increasing population lives on marginal land that is more susceptible to natural disasters. If an alternative to the neoliberal road of development that emphasizes urbanization and industrialization is not found, the survival of millions of people in El Salvador will continue to be a precarious situation.

Permaculture practices provide guidelines for a viable alternative that will improve nutrition, and eliminate toxics from their food and their land. This can in turn provide a modest income and allow people to build upon a traditional lifestyle without depending on foreign investment, genetically engineered seeds, agricultural-chemical additives, or fossil fuels. Not only does the institute empower community members by teaching them skills about community organization and ecological agriculture, they also engage in training for women and youth development as a way to encourage growth of the entire community. They are able to pay promoters in the communities a small stipend, and some become paid employees of the institute. People are learning to use what they have on their own land to support their family. This has the potential to liberate

the entire community from the constant cycle of debt associated with conventional farming methods that require farmers to pay exorbitant prices for fertilizers and pesticides each year. More importantly, teaching ecological techniques for agriculture can liberate the land from five decades of chemical invasion.

Social Movements

Although high migration rates and widespread violence are disturbing trends, neither is new to El Salvador. This is attributed to the historic poverty and systematic oppression in the country. However, obstacles can be opportunities and some Salvadorans have become engaged in social movements in order to bring about social change. A social movement is defined as a large group of people consciously engaged in a form of collective action for change (Kane, 2001). Since the 1960s, social movements have combated extreme poverty, inequality, and lack of basic services throughout Latin America, including popular education, liberation theology, and the *Campesino a Campesino* (Farmer to Farmer). During that time period, the permaculture concept developed in Australia. Although all of these movements are unique and contain specific differences setting them apart from each other, they also have similarities. These common characteristics include a decentralized structure, an emphasis on dissemination of knowledge, encouragement of individual agency, teacher training, and focus on marginalized populations. In El Salvador, all of these movements are still present in some form and each has proven popular and effective. The following table provides a very simplistic summary of the four movements for guidance through the following information.

Comparative Social Movements					
Table 3.2					
Name of Movement	Year	Place of creation	Main focus	Knowledge dissemination	Actors
Popular Education (Hammond, 1998)	1961	Brasil	Raising consciousness; how individual experiences are part of wider social problem; literacy	Engage students in political/ social involvement; empowerment; teacher training	Marginalized populations; rural/urban poor communities; illiterate
Liberation Theology (Peterson, 1997)	1968	Medellín, Colombia	Human rights; social justice; poverty; biblical justification; self-actualization	Train community leaders; empowerment; decentralized factions	Members/ clergy of Catholic Church; marginalized populations; Leaders; Christian base Communities
Campesino a Campesino (Holt-Gimenez, 2006)	1972	Guatemala	Sustainable (ecological) agriculture; seed sharing; health	Train/create leaders; teacher/ promoter training; lead by example	Subsistence farmers; communities; promoters
Permaculture (Holmgren, 2002)	1974	Australia	Interdisciplinary sustainable (permanent) culture & agriculture; human & environmental health & rights	Certificate courses; Teacher training; lead by example; activism; empowerment	Concerned/ conscious world citizens; farmers; progressive activists; ecological communities

A description and brief history of each of the Latin American movements is followed by a recount of these movements in El Salvador.

Popular Education

Although popular education does not have a single definition, it can be described as an educative practice located within a wider process, which intends that the popular sectors constitute themselves as organized and conscious political subjects (Garcia-Huidobro, 1983). It is formed through many Latin American theorists dating back to 1900 with the Cuban Jose Martí and Uruguayan José Pedro Varela, José Carlos Mariátequi in the 1920s from Peru, Augusto Sandino and Mexican president Lázaro Cárdenas in the 1930s, and the more recent Brazilian philosophers Alvaro Veira Pinto and Paulo Freire (Austin, 1999). Movements of popular education focus on economic, social and political determinism creating an interaction of education and democracy. Popular education means education of, by and for the people (Hammond, 1999). The following elements are typically present: horizontal relationships between facilitators and participants; response to a need expressed by an organized group; group involvement in planning the training and political action; and acknowledgement that the community is the source of knowledge (Hamilton & Cunningham, 1989). Community members organize, create and conduct their education outside of the governmental system. This form of education combined with the progressive Catholic religion created a powerful counter force to the Salvadoran oligarchic system, which denied rural access to education.

Liberation Theology

A phenomenon developed in the late 1960's that directly challenged the oligarchic system through an organization that typically supported it. The Catholic Church derived social movement is called liberation theology and its emergence greatly influenced many countries in Latin America and the world. Liberation theologians taught

social issues and community organization through biblical roots, which led to political action and ultimately revolution. Christian Smith (1991) explained that liberation theology is both a movement and a theology. As a theology, it is a coherent set of religious ideas, which encompass liberation. As a movement, it is organized to mobilize a previously immobilized population for collective action in order to promote social change.

Within the past 150 years, Catholic bishops met on several occasions to discuss the role of the church in modern times and their direction for the future. In 1869, the church held the First Vatican Council to define the doctrine concerning the church and to gain confirmation on the position the pope took condemning rationalism, liberalism and materialism (Hales, 1958). The Second Vatican Council, or Vatican II, was held from 1962-1965, during which they continued to examine the gospel and the church in relation to the modern world. According to Anna Peterson (1997), “the Council’s final document affirmed that the church has a responsibility to act in the world on behalf of the poor and weak; that the right to have a share of earthly goods sufficient for oneself and one’s family takes precedence over the right of the wealthy to accumulate private property; and that poor individuals and poor nations have the right to political equality,” (p. 48). Some clergy in Latin America understood this as an invitation to identify with the cause of the poor and to change their teachings and practices accordingly (Hammond, 1999).

The Latin American bishops met in Medellín, Colombia in 1968 to discuss how to implement the Vatican II into the region. The results of this meeting became known as liberation theology. According to John Hammond (1998), liberation theology teaches “that God acts in history, that all human beings share a dignity that deserves to be

honored in the present life, and that people must act to put God's will into practice," (p. 26). The work of Paulo Freire was already well known by the Medellín conference and conscientization was one of the ideas underpinning the proceedings (Smith, 1991). In fact, the concluding statement of the chapter on education of the Medellín conference called for a liberating education, demonstrating the influence of popular education within Latin American Catholicism (Hammond, 1998). The bishops agreed that the cry of the poor was for liberation, the church should identify with the poor, and to increase the participation from the local community in church affairs, which was called Joint Pastoral Practice. These bishops inspired new practices in the church, which included sermons delivered in vernacular languages instead of Latin, music and popular genres were introduced, and lay people became active agents in church activities.

Movimiento Campesino a Campesino (Farmer to Farmer Movement)

Along with the emergence of popular education and liberation theology, another grassroots educational methodology developed in the 1970's in Central America. This is the methodology utilized by IPES, therefore it is important to define its origin, development, and practice. *Movimiento Campesino a Campesino* (MCAC) began in the community of Chimaltenango, Guatemala in 1972 by Kaqchikel Maya. The *Campesino a Campesino* methodology was a response to failing conventional agricultural practices in rural Mesoamerica. It is a methodology to teach ecological agriculture alternatives to local farmers. MCAC utilizes local participants and resources to maximize production and environmental conservation (Bunch, 2002). MCAC relies on the decentralized participation of community members and empowerment like liberation theology and

popular education; however, the focus of this education is sustainable and healthy agricultural practices.

The new soil and water conservation techniques produced improvements within one to two years. As the results became known, interest and enthusiasm grew rapidly. Farmers were encouraged to share their newly acquired knowledge with others who demonstrated interest. Roland Bunch explains the importance of success and community enthusiasm in *Two Ears of Corn: A Guide to People-Centered Agricultural Improvement* (1982). A recognizable success is “a solution of a felt need with results that are both readily observable and desirable according to the culture’s own value system...Where there are no recognizable successes, there will be no enthusiasm,” (p .25). The successes continued in Chimaltenango and so did community enthusiasm. This teaching methodology spread throughout Mesoamerica, and thrived in Nicaragua and Cuba, among other countries (Holt-Gimenez, 2006).

According to Holt-Giménez, a succession of meetings was held with the farmers across Nicaragua conducted by the *Unión Nacional de Agricultores y Ganaderos* (National Farmers and Ranchers Union, or UNAG). The *Programa Campesino a Campesino* (PCAC - Farmer to Farmer Program) was one of their most successful project areas. At one of these UNAG meetings, a farmer held up a highly productive bean plant, and invited the other farmers out to the community to see the work PCAC had done with soil and water conservation. From then on, UNAG and the Sandinista government publicly endorsed PCAC and the movement flourished. The more visible the success stories became, the more farmers wanted to learn. “By 1991, the dozen promoters from PCAC had given over 500 workshops, to some 3,000 *campesinos*... By 2000 PCAC

boasted 1,487 promoters and claimed to serve 28 percent of rural Nicaraguan families,” (Holt-Giménez, 2006, p. 22).

MCAC realized unprecedented growth and success in Cuba with the fall of the Soviet Union, their closest ally and source of the majority of their food supply. The Cubans received petroleum-based fertilizers, pesticides and herbicides, as well as machinery for production from the Soviet Union. When this ended abruptly, the country was left to its own devices to provide food. Many joined food production in city gardens and the countryside. “Because of the need for an agro-ecological alternative, and because of the extensive and highly active presence of a national small farmers union (ANAP), the *Campesino a Campesino* movement grew very quickly in Cuba,” (Holt-Giménez, 2006, 33). MCAC in Cuba grew to over 100,000 farmers in eight years. It took twenty years in Mesoamerica for it to become that size.

Important lessons can be learned from the Cuban experience. Their success can be attributed to the effectiveness of ANAP to organize farmers, and to the high level of education and health care Cuban’s receive. Also, the decentralization of technicians allowed them to direct research and create practices to ecosystem-specific agricultural problems. Another major factor is the guaranteed market for farmers’ produce. They have a base price for produce regulated by the state, or they can sell it on the private market, but there is no need to sell for less than the state will pay. The president of ANAP, Lugo Martínez, stated that food security is found in their silos. In Cuba, the silos are used to store seed and food for family consumption, not to store the food until the market prices rise as they are used in other countries. “That is agricultural

sustainability...That is national security and food security,” (Holt-Giménez, 2006, p. 39). Food security is also possible in El Salvador with the proper support.

The Social Movements in El Salvador

Popular Education and Liberation Theology

Religion is an important part of Salvadoran society; in fact the name of the country means “the savior”, in honor of Jesus. The majority of the population is Roman Catholic, although there is also a strong evangelical movement. The Spanish converted the indigenous people to Catholicism. However, the people combined their native spiritual beliefs with those of the imposed religion to create a different form of Catholicism. The syncretic traditions of the *Virgen of Guadalupe*, *el Cristo Negro*, and *Dia de los Muertos* are examples of this combination. It is not surprising that many people became involved with the religious movement that directly addressed their social, political and economic concerns. Similarly, the combination of the permaculture design course by Juan Rojas with the spiritual beliefs of Mayan cosmology is also easily accepted and understood. This is explained later in the chapter.

Liberation theology spread throughout Latin American countries in different forms. In El Salvador, many priests and nuns joined the call to identify with the poor and moved from comfortable locations to the impoverished countryside or city slums. The places where church people relocated in order to practice liberation theology became known as *Comunidades Eclesiales de Base* (Christian base communities). Hammond (1998) describes one of these priests, José Inocencio Alas, who left San Salvador to work in the municipality of Suchitoto in 1968. Alas quickly realized that it was impossible for one priest to adequately serve twenty-five communities. Based on the Vatican II, the

meeting in Medellín, and work done by other clergy, he decided it was best to train local community leaders who were elected by the communities to educate others about the word of God. Trainings were held and Alas taught them about the theme of community in the Bible, to relate the Bible to their own lives, and how to teach others. The community leaders held weekly services and taught catechism classes, while Alas visited to conduct mass once a month in each village. Other priests and nuns joined Alas in the rural areas and municipalities throughout El Salvador. They began organizing, training leaders, and teaching the gospel with the interpretation of their lives in poverty.

Popular education greatly influenced these teachings with an emphasis on liberation from injustice and raised consciousness in relation to their social situation. Little distinction was placed between education and community organization as the sessions included expanding learning skills, analyzing social structure, and organizing for change. The Catholic peasant groups organized to demand fairer wages, land distribution, political participation, and improved living conditions (Peterson, 1997). Historically, the Salvadoran society was based on a strict hierarchy, which included the church. But with the decentralization of the church and these educational sessions, the barriers of the hierarchal society began to unravel and the poor began to see themselves as important factors in their community. Participants assumed that everyone had something to teach, and that everyone could learn from everyone else. This is a great distinction from the centuries of domination when *campesinos* were taught that they were too ignorant to learn or participate in society (Hammond, 1999).

Archbishops of El Salvador

Other countries in Latin America practiced liberation theology to different degrees. This was mainly dependant on if the bishops themselves embraced it (Peterson, 1997). Some bishops were sympathetic while others were hostile towards these new ideas. Central America proved to be one of the regions where liberation theology had the greatest effects. In El Salvador, the archbishop of San Salvador from 1938-1977, Luis Chávez y González, was politically conservative, however receptive to the message from the Vatican II and Medellín. Chávez y González created the Foundation for the Promotion of Cooperatives (FUNPROCOOP) in 1968 to stimulate the growth of rural cooperatives throughout the country (Hammond, 1998). He held a conference in 1970 called, the National Week for Joint Pastoral Practice, and invited priests from rural origins in order to promote the developments from Medellín, thus encouraging rural organization and education.

Delegates of the Christian base communities attended special education trainings, which were held at church retreat centers. The trainings focused on three themes: Christian theology, the national reality, and organizing techniques (Hammond). These themes carried into literacy, health care and agriculture education. The trainings encouraged the delegates to become promoters of health and literacy in their communities, a practice that continued during the civil war (Kane, 2001). Church workers agreed that education was necessary for intellectual and spiritual growth, and literacy became increasingly important. However, community organizing, leadership development and pursuing grievances proved to be the most effective educational themes.

In 1977, the Catholic Church chose the conservative and quiet Oscar Romero to be the next Archbishop of San Salvador. However, shortly after his inauguration, his friend and liberation theologian, Jesuit Rutilo Grande was assassinated. Monseñor Romero never attended another government event (Peterson, 1997). The kind-hearted priest quickly became one of the loudest examples and most outspoken advocates of liberation theology and human rights in Latin America. Archbishop Romero said, “*Defender los Derechos Humanos es cumplir el Evangelio,*”⁸ (Romero, 2000, p. 60). His commitment to the poor continues in the hearts of many (Peterson).

The creators of popular education and liberation theology did not intend to provoke violence and rural uprising; however, a twelve-year civil war occurred in conjunction with these social movements in El Salvador. Freire’s model of popular education was not developed as a political agent against oppression, but rather to contextualize the educational material to the learners’ every day life. Education may motivate students to become politically active, but that is an effect of popular education more than the cause (Freire, 1973). But according to Hammond (1999), in El Salvador the opposite proved true. Education was initiated to serve an existing political movement. In El Salvador, popular education integrated learners’ cognitive development, and their political consciousness. They understood that the more they learned the more intellectual ammunition they would have against their oppression.

The original involvement by the church to introduce and encourage participation in liberation theology was not meant to bring about an armed struggle. However, the oligarchy grew increasingly concerned about the protests and political actions typically

⁸ Translation: Defending human rights is fulfilling the Gospel. (Romero, p. 60)

centered in the Christian base communities and among intellectuals. The military and paramilitary increased their oppression through violence and murder of thousands of Salvadorans, including twenty-two Catholic priests and nuns, a seminary student, a Lutheran minister, and the beloved Archbishop Romero (Peterson, 1997). His assassination occurred during mass the day after he declared, “*Les ruego, les suplico, les ordeno en el nombre de Dios: ¡Cese la repression!*”⁹ (Romero, 2000, p. 90). This combined with the massacre that took place during his funeral indicates the extent of violence and oppression that ignited the armed uprising (Peterson). This is mentioned to give context as well as to illustrate the dedication and passion that lives in Salvadorans. Thousands have actively engaged in creating a better society for themselves and the future generations, despite the atmosphere of fear present at that time (Peterson).

Christian Base Communities

According to Hammond, (1999), the Christian base communities (CEBs) often worked collectively in cultivation of crops to be more efficient and aid those who could not tend to their fields. The National University aided in connecting students with communities. Urban youth trained in liberation theology traveled into the countryside to share knowledge and interact with the rural communities. This relationship was viewed to serve the poor by sending out people educated in different skills, and serve the students by exposing them to the reality of their country’s poverty.

Some teachers also took it upon themselves to teach in the countryside on weekends or during vacations. It was widely assumed that if people became literate and

⁹ Translation: I beg you, I implore you, I order you, in the name of God: Stop the repression! (Romero, p. 90)

learned how to organize, they could begin to address the other issues, such as lack of clean drinking water, electricity, health care and access to public transportation (Hammond, 1998). As the students and teachers connected with the rural communities, they realized the *campesinos* were not only eager to learn, but fully capable to do so. They were quite effective at assessing their situation and public speaking and often became influential leaders (Hammond). Some of the student workers stated that they learned more from the *campesinos* than they were able to teach (Kane, 2001). This is a sentiment that I share with them, and the foundation for successful informal education that continues today.

Popular Education Centers: Refugee Camps and Communities

During the war, some *campesinos* joined the FMLN (Farabundo Martí Front for National Liberation), others fled to refugee camps, and some wandered the mountainous jungles hidden from the government's armed forces. Thousands crossed the border to Honduras, which offered a protected environment where informal education flourished. Many refugees were from Christian base communities, which participated in education, and in turn become teachers in the camps. During their previous teachings, "they had acquired a vision of a good society in which all would work together for their mutual benefit, and the refugee camps offered an opportunity to put that vision into practice" (Hammond, 1998, p. 77).

Education became a central activity, which attracted worldwide attention. Foreigners arrived and saw that these people were so eager to become literate that they were using sticks to write in the dirt. They started sending paper and pencils. In some camps, libraries were established to house donated books. The refugees began to create

health and nutrition pamphlets and posters with their new skills and donated equipment. By 1989, 85 percent of the refugee population was literate (Hammond, 1998). The Honduran government, influenced by the United States government, thought of them as FMLN training centers and refused to allow people to leave until the end of the war. They also tried to take over the schools and instill their own curriculum but the refugees protested with hunger strikes and demonstrations. As people returned to their communities, they were often thought of as trained and respected leaders.

Although the majority of the population of the northern mountain range fled to Honduras, some remained in the villages. Despite the fear of army invasions, mortar attacks and death squads, several communities organized councils, which came to act as the local government. Their main purpose was to create education centers, and they sought out popular education teachers. They offered classes at night so that families could tend the fields during the day. The people formed their own cooperatives and raised crops on the abandoned land. Communities worked together to build schools, but the military often destroyed the building if they knew it was being used for education. The government believed that these were centers of subversion created by and for the FMLN (Hammond, 1998).

Popular education is only possible with a high level of community solidarity and a deep-rooted sense of reciprocity. Communities put their energy into education because it was regarded as a necessity. These schools were not without their faults, but they were a physical representation of the Salvadorans' desire to improve their lives and their community through their own means. They knew if their quality of life were to improve, they would have to do it themselves. This belief is present today and vital to the spread

of informal adult education across the country. It has proven successful. Although there are other organizations that have built their work off of popular education and liberation theology, I focus on the work of the Permaculture Institute (IPES).

Father Ventura developed Christian base Communities in the region of northern Morazan, which included the communities of Torola, Villa El Rosario, San Fernando, and eventually Cacaopera (Binford, 2004). These are the same communities that began the Farmer to Farmer Movement in El Salvador, and the oldest members of IPES. Father Ventura is quoted in *Landscapes of Struggle*, “Through the Bible the poor would discover themselves as human beings with the capacity to transform their own history, not to have to live as slaves, or as persons condemned to die young, or to be illiterate,” (Binford, p. 119). This previous training lays a foundation for the Farmer to Farmer movement, permaculture and sustainable development education. The community members continue to turn the education into a reality.



Figure 3:3
Mural: Monseñor Oscar Romero, Mesoamerican symbols, and farming.

Morazán, El Salvador

Photographer: Robyn Wilson

Christian Base Communities and Farmer to Farmer Movement

Karen Inwood, the executive director of IPES, explained to me the beginning of Farmer to Farmer Movement (MCAC) in El Salvador during an interview (personal

communication, June 23, 2006). She said that she didn't know a lot about the early history of it in the country. MCAC work began in the 1970s, but along with the other farmers' movements, it was destroyed during the depression and the civil war. Then in 1994, there was an initiative to restart MCAC, which was promoted by Oxfam's South-to-South project. They made some contact with some other non-governmental organizations (NGOs) already present in El Salvador, and invited people who had some experience with ecological agriculture to a meeting in Perquín, Morazón. Lorenzo Viagas and Leoncio Rodriguez, both IPES founders and promoters, were some of the first invited to attend. Juan Rojas, on behalf of the organization Christian-base Communities of El Salvador (*Comunidades Eclesiales de Base de El Salvador - CEBES*), was also invited along with individuals from all over the country. During the meeting, they made the decision to set up two commissions, one for the west of the country and one for the east, which was Morazán. They had meetings and activities and some went to other countries to look at successful MCAC work, including Nicaragua.

Eventually, the only part of MCAC that continued was the commission in Morazán. Juan Rojas, Lorenzo, and Leoncio were key in making sure that initiative continued. Rojas began to get a little bit of funding, from Germany and elsewhere, as well as the Mennonite Central Committee, who had an office in El Salvador to support that work. Leoncio said that he and other subsistence farmers went to an organic farm in San Lucas Toliman, Guatemala to work and learn in 1998, 1999, and 2000 (personal communication, June 30, 2006). They began trainings in communities and people started to practice permaculture. They attracted more people to the MCAC commission in Morazán. Rojas explained to me in an email that he began permaculture work with

CEBES when he returned from exile because they had worked together in the past (personal communication, January 6, 2007).

They decided to begin work in Morazán for several reasons. First, CEBES had worked with a network of CEBs in Morazán. These communities had impressed Rojas with their endurance and courage through the period of war, and he wanted to learn from their motivation and energy. Second, Morazán was a target of a lot of post-war reconstruction. Rojas wanted to help with the reception of foreign aid and encourage sustainable development and permaculture practices. Finally, starting from scratch intrigued him. The military had used scorched earth tactics and poisoned the land. He found the farmers to be receptive to the practices and supportive of his effort to revitalize farmlands in this area.

In 1998, CEBES received funding to start work in La Libertad. Rojas ran a permaculture course in La Florida, which was an internal refugee community and now home of IPES. That is how Daniel Rosales, the president of IPES, became involved. In 2000, they formed the second MCAC commission in La Libertad. During an interview, Rosales said, “I wanted to continue to work with the project and knowledge of permaculture because it is more practical than theoretical. This is fundamental for the rural farmer to understand...and this is why I stayed and continue to work with permaculture,” (personal communication, June 22, 2006). Both commissions worked with the idea of taking the permaculture trainings into the communities and encouraging people to form some kind of organization. These were usually small MCAC committees. They shared the goal of practicing permaculture and training others.

MCAC – Permaculture - IPES

According to Karen Inwood, the group of leaders who were part of the established MCAC movement founded IPES. Most of them had participated in a permaculture design course and earned permaculture design certificates (personal communication, June 23, 2006). With the established commission in La Libertad, the members started began to discuss if it would be a good idea to form a Permaculture Institute. They unanimously decided to go ahead with a formal institute and began to discuss their needs and design plans. In June of 2002, they decided to become independent from CEBES. By the beginning of 2003, the institute became a nonprofit organization in the refugee community of La Florida, La Libertad.

IPES continues to expand and promote their work through a series of visits and trainings to communities who come to IPES asking for permaculture and sustainable development training. They utilize a cyclical process of engaging small farmers in specific philosophies and techniques that they can teach to others; multiplying the effects of their work. IPES trains the most active members in the community to be promoters within their own communities. When the funding becomes available, they train them how to become promoters in order to teach in other communities. Juan Rojas described the work of Leonico and his son Rejino in Torola, Morazán.

In this municipality, these two people along with eleven others are working with farmers and poor families in order to show them how [permaculture] works. To show how it is possible to improve their health by not using chemicals. How it is possible to increase their production by using the resources available on their land. How it is possible to support biodiversity while using local seeds and exchanging them with their neighbors. As well as exchanging traditional knowledge, and the knowledge of permaculture, and the knowledge of established farmers, like them, that teaches how to work the land more naturally. (personal communication, June 30, 2006)

By using the Farmer to Farmer methodology, farmers hear about these very different and challenging practices from other farmers. The promoters are in the same economic situation and face the same problems as the farmers, but they also have had success with these techniques on their own land.

Whole Community Philosophy



Figure 3:4
Women learning how to build an inexpensive rainwater collection tank.

Morazán, El Salvador

Photograph provided by IPES

The training at a new community begins with a visit to a local demonstration site so that the new participants can see examples of the things they will be taught. They follow that up by a one-day training where the community learns about the curriculum layout and Farmer to Farmer Methodology. The community decides if they can make the three-year commitment. Teams of IPES promoters visit the communities and progress through a series of courses.

Besides the teaching ecological agriculture and permaculture practices, IPES also works towards sustainable development of the entire community. Rural El Salvador has strongly defined gender roles. IPES discusses gender issues and encourages women's participation in community processes. IPES forms women's groups where there is not a one already established, and work with the group if one already exists. Training for the

women's groups consists of improving diets, and planting and managing home gardens. They also learn about medicinal plants, how to make homemade soaps and shampoos, and appropriate home technology. This includes the building of improved stoves, water recycling, rainwater collection systems, and composting latrines (Inwood, 2006). There are also annual retreats for women and continual support. IPES encourages women to take on leadership roles and to attend all of the trainings.

IPES conducts leadership training to two members of each community in order "to develop leadership in each community, capable of promoting and teaching agro ecology and of facilitating a process of sustainable community development" (Inwood, 2006, p. 14). The training deepens their understanding of environmental and community problems as well as enhances their ability to analyze and problem-solve. It also improves their skills in motivating others and facilitating community processes. During the year, the participants have the opportunity to work as community promoters, accompanying IPES promoters at trainings in other communities. The community leaders are trained in permaculture design to enable them to develop their own demonstration sites. Training includes the ethical principles of permaculture and the environmental, social, and economic reality they face. They then teach basic ecology, and permaculture design. The leaders are expected to develop a plot of their own land with permaculture principles. IPES is able to help support them with seeds, plants, and materials (Inwood).

Permaculture and Mayan Cosmology



Figure 3:5
Cholq'ij calendar at Juan
Rojas' house.

La Florida, La Libertad
Photographer: Robyn
Wilson

Sitting on the porch at Juan Rojas' house in La Florida, La Libertad, El Salvador, he explained to me the combination of Mayan Cosmology with the ten-day permaculture design course (personal communication, June 21, 2006). Rojas now works as a consultant for the Mesoamerican Permaculture Institute, based out of Guatemala. He conducts permaculture design courses in Mexico, Guatemala, Nicaragua, and El Salvador, and members of IPES are always invited to receive their design certificate. Rojas told me about the last training they had, and how it was based around Mayan spiritual beliefs and the Mayan calendar, *Cholq'ij*. A very basic definition of the word spiritual is “of, or relating to, the human spirit or soul as opposed to physical or material things,” (Oxford American Dictionary, 1999). The combination of Mayan spirituality connects the ethics and principles of permaculture with their land, and their Mesoamerican roots.

In *México Profundo*, Guillermo Batalla explains, “Mesoamerican civilization arises directly from the invention of agriculture,” (1996, p. 4). Batalla writes that agriculture began in this region between five thousand and seventy-five hundred years

ago, but hunting and gathering also continued. “The cultivation of corn was a momentous achievement and remains linked in an inseparable way to Mesoamerican civilization,” (p. 4). Mesoamerica is a vast region that stretches between what is now known as Central Mexico through Nicaragua. Many cultural variations exist throughout the region, but they are related to the mother culture of the Olmecs (Batalla). The Olmecs populated the region and influenced the Pipils, Lencas, Mayans, and many other Mesoamerican cultures (Hecht et al., 2005a).

Rojas said that this connection creates a much stronger commitment to permaculture philosophy and practices, and he would not conduct another training without it. This is accepted similarly as the combination of spirituality with empowerment was accepted among Christian base communities through Liberation Theology. As noted, Salvadorans are typically Christians, and only one percent of them are considered Amerindian. However, there are thousands of rural Salvadorans who consider themselves indigenous. Henrik Ronsho (2004) stated,

More than anything else, it is fieldwork that forms the core of the *Indio* identity and this identity is thus linked to the search for livelihoods. The same applies to the notion of *Indio comalero*, a notion directly related to the livelihood strategies of indigenous women...Indigenous groups are left in the borderlands of this concept’s common use. They are hardly indigenous to the outside observer, but they are definitely *indios* to the local *ladinos*. (p. 225)

Rojas works with Mayan shamans to combine Mayan cosmology with the permaculture ethics and design principles. Although they may not be Mayan, rural Salvadorans identify more with Mesoamerican indigenous populations than that of “Western” culture, which they typically characterize with the *mestizos* in the urban areas. However, they have been able to combine religions and spiritual beliefs throughout history. Rojas told me that this combination is both practical and empowering. It emphasizes personal

responsibility for the earth and for each other, and deepens the participants' level of commitment (personal communication, June 21, 2006).

Permaculture Design Course According to Mayan Cosmology - Table 3.3			
Day of training	Mayan name*	English translation/Symbol*	Corresponding Theme - Permaculture Course**
	Kib	Wax/Soul/Owl - Corn giving	Travel to training
1	Kaban	Movement/Earth - Day of Grandfathers	Wisdom of Maya/calendar, human connection with world
2	Etnab	Knife/Stone – Tools	Permaculture concepts
3	Kawak	Rain/Storm	Rivers/lakes/dams
4	Ahaw	Lord/Flower	Water/fertility/energy
5	Imix	Water Lily/World	Sun/solar
6	Ik	Wind	Wind/protective barriers/natural fencing
7	Akbal	Underworld/House/Night	Geology of land/utilizing nature
8	Kan	Maize	New vision/community/trade/new alternatives
9	Chikchan	Snake /Horizon	Resurrection/permanence/Sustainability
10	Kimi	Death	Wisdom/mystery/natural patterns
	Manik	Hand – Day of Unity	Travel home

* (Milbrath, 1999; Aveni, 2001)

** (Rojas, J., personal communication, June 21, 2006)

Different cultures use a variation of the Mayan calendar throughout Mesoamerica, including ancestors of El Salvador's native Pipil. There two calendars that the Maya used to distinguish specific days. The *Cholq'ij* has twenty days with different energies combined with thirteen weeks, which equal 260 days. The Haab has an approximate 365 days. The Maya had complex ways of measuring time. Without going into detail, the connection between the earth and humans is accentuated throughout every measurement.

Batalla writes, “[Mesoamerican] knowledge and experience are consistent with particular ways of understanding the natural world, and with profoundly rooted systems of values, forms of social organization, and ways of organizing daily life. This is to say, they are part of a living culture,” (1996, p. 13). The permaculture training consists of ten days that are aligned with the energy according to the ten of the twenty days on the *Choloq’ij* calendar. Table 3.3 represents each day’s energy in correspondence with the activities and theme for the ten days of training.

Conclusion

Many people in El Salvador face formidable obstacles. Although resilient and motivated, they cannot continue on the path they currently follow. Increasing crime, migration, and poor health conditions are not sustainable. An alternative must be made possible. The teachings of the Permaculture Institute provide an alternative to the current situation by teaching people organic agriculture, medicinal plants, income generation, appropriate home technology, leadership skills, and empowerment. The civil war ended only fourteen years ago, and it is evident in the society today as many people continue to search and struggle for a better quality of life.

Karen Inwood stated during an interview, “If a community is already politically conscious and has a high level of organization then they grasp [permaculture] much faster and they can see that it is in some way linked to their struggle for freedom, and their struggle for land, and their struggle for justice,” (personal communication, June 23, 2006). IPES is a non-partisan organization that will work with anyone who is committed to sustainable community development. However, they have found great success in those areas of the country where the people have previously engaged in social movements and

collective action to improve their lives. The Farmer to Farmer methodology is tied directly to what has succeeded previously in the country and continues to be successful.

People Care begins with the individual and spirals out to include others. Community health depends on the participation of the whole community, human and non-human alike. The history of the social movements in El Salvador demonstrates the continued commitment to community that is native to their culture. This creates an atmosphere where the ethic of People Care thrives.

CHAPTER FOUR: FAIR SHARE ECONOMICS IN EL SALVADOR

If neoliberalism helped the native people, why do we have nothing and the foreigners have everything?

~ Campesino, Buen Samaritano, El Salvador (personal communication)

This chapter describes the current economic situation and a brief economic recent history in El Salvador to examine neoliberalism and its repercussions in El Salvador. The ARENA government fully endorses neoliberal policies as the means for development including pursuing industrialization and the implementation of the Central American Free Trade Agreement (CAFTA) with the United States. They attract multinational companies to utilize the workforce in low-wage positions with no environmental regulations. The ARENA government states that this is the solution to poverty for the country. Although there have been some benefits from neoliberalism, such as creating a middle class where one did not previously exist, there are additional consequences. This is a country that has engaged in international trade for five hundred years and I do not mean to suggest that this will end anytime soon, or that all Salvadorans are opposed to neoliberal development. Just as there are obvious contradictions within the land and its people, El Salvador is also filled with contradictory economic opinions. Economics and politics are volatile subjects in every country; however, in a post-civil war era, the differences in these beliefs are well-developed arguments as well as emotional topics. By dissecting the policy and the situation, specific concerns and consequences of globalization can be determined, and its sustainability assessed.

I have a bachelor degree in International Business and was trained in neoliberal expansion. This training allows me the ability to clearly understand both sides of this

debate and analyze what I have experienced. The conclusion I found is that an alternative to neoliberal development is urgently necessary and requested by many people in El Salvador. Through an examination of El Salvador, the consequences of neoliberalism in this small country demonstrate the reality throughout the world. There is sufficient evidence to suggest the poor and the agricultural producers are not receiving benefits of this type of economic policy, and an alternative to this system is necessary. I assume that El Salvador will continue to develop according to neoliberal policies, unless there is a collapse in international trade. But I also propose that an alternative to neoliberal policies that support agriculture and the rural poor can co-exist with neoliberalism. This will make the country stronger, more stable, and more productive as a whole. Therefore, it is in the best interest of everyone in El Salvador to encourage an alternative that supports the rural poor and the environment.

The Fair Share ethic serves as guidelines for those who truly want to benefit the whole population, and for everyone to improve their quality of life. Through supporting local businesses, and production and sale of organic and ecologically sustainable products, Salvadorans can improve their environment and their quality of life. By educating agricultural communities about how to maximize production while using the resources on their own land, they become independent of debt and foreign agro-chemicals. The work of the Permaculture Institute of El Salvador is a viable option especially for the rural poor as neoliberalism and industrialization spreads. The founders of permaculture addressed economics through the third ethical principle, Fair Share. It is an economic philosophy that is based on long-term sustainability and the other two ethical principles, Care for the Earth and Care for People.

Neoliberalism

Neoliberalism is the current business model of El Salvador and the United States, among many others. The very basic definition of neo-liberalism is the free movement of capital, goods, and services (Bayes, 2006). Oxford's American Dictionary (1999) defines neoliberalism as "a political movement beginning in the 1960s that blends traditional liberal concerns for social justice with an emphasis on economic growth." The Latin root of liberal is *liber*, which means free. Likewise, the word *liberalization* means free of government intervention by removing restrictions. It is system based on free enterprise and free trade. Neo-liberal policies include:

- ❖ Fiscal discipline
 - ❖ A redirection of public expenditure priorities toward fields offering both high economic returns and the potential to improve income distribution, such as primary health care, primary education, and infrastructure
 - ❖ Tax reform (to lower marginal rates and broaden the tax base)
 - ❖ Interest rate liberalization (removal of restrictions)
 - ❖ A competitive exchange rate
 - ❖ Trade liberalization (removal of restrictions)
 - ❖ Liberalization of inflows of foreign direct investment (removal of restrictions)
 - ❖ Privatization
 - ❖ Deregulation of protectionism (to abolish barriers of entry and exit of international trade)
 - ❖ Secure property rights
- (Bayes, 2006, p. 4)

Neoliberalism is the dominant economic structure worldwide. There are polarized views of the true consequences of neoliberalism. Some argue that neoliberalism will "lift all boats", therefore benefiting everyone; others disagree.

Critiques of Neoliberalism

There are contradictory positions regarding the actual consequences of neoliberal policies. While multinational corporations, international financial institutions, and many

governments engage in these policies, protests against them are on the rise throughout the world. Globalization is marketed as a model in which the poor are to rise out of poverty; it was promoted as an economic system that would automatically “lift all boats”. Critics contend it tends to produce a worldwide class division, in which the labor of the underprivileged and their natural resources support the consumption habits of the privileged (Brecher & Costello, 1998). Evidence suggests that there are environmental and social concerns that are aggravated by the implementation of neoliberal policies, including further destruction of the environment, and increasing poverty due to income disparity. The 2006 United Nations Development Program Report states:

Ours is a world of extremes. The poorest 40 per cent of the world population – the 2.5 billion people who live on less than \$2 a day – account for five percent of global income, while the richest 10 percent account for 54 percent. Never before has the goal of abolishing poverty been within our reach: there are no longer any insurmountable technical, resource or logistical obstacles to achieving it. Yet more than 800 million people suffer from hunger and malnutrition, 1.1 billion people do not have access to clean drinking water and, every hour, 1,200 children die from preventable diseases. Despite a growing world economy and significant advances in medicine and technology, many people in developing countries are not reaping the potential benefits of globalization. (United Nations, 2006)

As the United Nations’ report indicates, hundreds of millions of people continue to suffer from extreme poverty in the age of global neoliberalism. The wealth and resources are not fairly distributed among the participants. The world is divided by growing inequality, as wealth, labor and resources from the majority of the world's people are transferred to global corporations and the elite. The 2003 United Nation’s Human Development Report found that 54 countries experienced a fall in income over the last ten years. Meanwhile, between 1983 and 1999, the profits of the largest 200 corporations grew by 362.4 percent (United Nations, 2003). Countries compete for foreign investment and make agreements

in order to obtain loans by promising low wages, low taxes, few labor unions, weak regulations, and the removal of subsidies (Brecher et al., 1998).

Neoliberalism in El Salvador

Mayor Roberto D'Aubuisson, a leader of paramilitary operations allegedly responsible for the assassination of the Archbishop Oscar Romero (Taylor & Vanden, 1982), was one of the founders of the party named Alianza Republicana Nacionalista (ARENA). ARENA won elections in March, 1989 and Félix Alfredo Cristiani became president. Both the Reagan and Bush Administrations widely supported the ARENA party and the application of neoliberal programs which restored and strengthened the economic and political power of the historical oligarchies (Corr, 1995). The neoliberal policies implemented included privatization of international trade, deregulation of fixed prices, division of land operated by cooperatives, privatization of public institutions and state businesses, and dissolution of social service organizations such as the *Instituto Regulador de Abastecimiento* (Institute of Supply Regulation) and the *Instituto de Viviendo Urbana* (Institute of Urban Housing) (Lopez, 2002). The war ended in 1992 when the ARENA government and the FMLN signed a treaty that provided for military and political reforms. Irina Carlota Silber in *Landscapes of Struggle* (2004) concludes that bargains were made on both sides to bring peace to the country, "Elites conceded political democracy and the FMLN conceded a liberalized market economy", (p.163).

Although 1989 is the year in which neoliberalism officially began, trade between the United States and El Salvador has a long history prior to the war. U.S.-Salvadoran trade relations have strengthened considerably in the past fifty years (LaFeber, 1993). El Salvador had an economic boom in the 1960's. The economy experienced a period of

industrialization where the manufacturing sector grew 24 percent. However the number of people employed grew by only 6 percent, the slums of San Salvador swelled, and the mechanization of agriculture created growing rural unemployment (Armstrong et al., 1971).

Another example of the relationship between the two countries is El Salvador has seventeen free zones called *zonas francas*, which house enormous *maquilas* (textile sweatshops). These were first established in 1972 to encourage large companies from the United States to build factories in El Salvador with tax-free guarantees, and exemption from labor and environmental standards (Alguilar, 2006). The companies demand thousands of workers, mostly women, to work long hours with wages around \$130 a month. More importantly, the workers are prohibited from organizing unions and rallying to improve their conditions, therefore their working conditions will not improve.

There are few environmental restrictions in El Salvador and industrialization has greatly contributed to the environmental degradation of the country (Navarrete-Lopez, 1994). It is considered that 90 percent of all surface water is contaminated due to industrial waste, agrochemicals and untreated organic material. Because over a third of the population depends on surface water for daily use, there are frequent reports of severe intoxication and deaths from chemical and waste ingestion (Pan American Health Organization, 1998). International experts described contamination in El Salvador as “the most serious environmental problem in Central America,” (Kovaleski, 1999). A continuation of free trade for El Salvador indicates the expansion of exploitative labor conditions, environmental degradation, decreasing agricultural opportunities, and a rapidly changing culture.

Current Economics in El Salvador

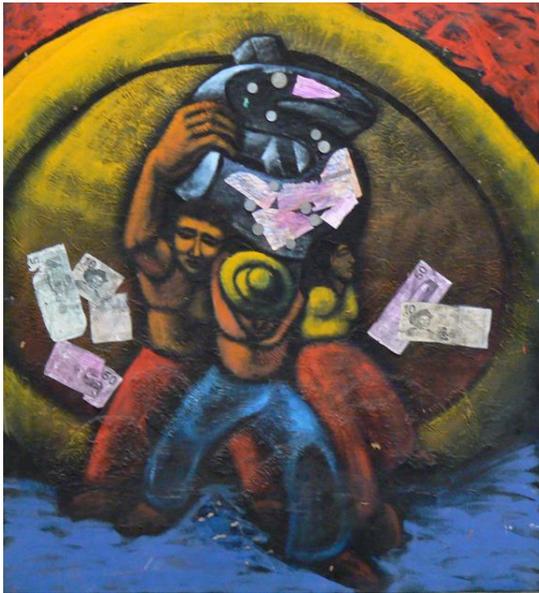


Figure 4:1

Painting depicting the loss of the Salvadoran *Colon* to the U.S. dollar. (Artist unknown)

National University, San Salvador

Photographer: Robyn Wilson

The United States is now El Salvador's most influential and aggressive trade partner. There are visible indicators of this. First of all, the country switched to the U.S. dollar in 2001, retiring their currency called the *Colón*. Another factor is that between 20 and 40 percent of the Salvadoran population lives in the U.S. contributing \$2.8 billion dollars in remittances to their economy (UNDP, 2005). Another important development is the governments of Guatemala, El Salvador, Nicaragua, Costa Rica, the Dominican Republic, and the United States implemented the Central American Free Trade Agreement (CAFTA) through the WTO in order to liberalize trade. El Salvador was the first to ratify CAFTA in December of 2005 through the ARENA leadership.

The United States government continues to strongly encourage the Salvadoran government into neo-liberal policies and publicly endorses the ARENA political party due to their liberal, pro-business agenda. The U.S. Department of State describes the neoliberal economy of El Salvador and their alignment with the U.S.:

The Salvadoran economy continues to benefit from a commitment to free markets and careful fiscal management. The economy has been growing at a steady and moderate pace since the signing of peace accords in 1992...Much of the improvement in El Salvador's economy is a result of free market policy initiatives carried out by ARENA governments, including the privatization of the banking system, telecommunications, public pensions, electrical distribution and some electrical generation; reduction of import duties; elimination of price controls; and improved enforcement of intellectual property rights. Capping those reforms, on January 1, 2001, the U.S. dollar became legal tender in El Salvador, and the economy is now fully dollarized. (U. S. Department of State, 2007)

The Salvadoran government claims that increasing trade with the United States will improve the standard of living for the entire population, but skeptics analyze recent history for evidence. According to the World Bank's Development Report, the richest 10 percent of the Salvadoran population, about 680,000 people, earned 40.6 percent of total income. The poorest 10 percent earned .9 percent of total income. This is half of what they made in 1988 when the poorest 10 percent earned 1.8 percent, one year before the adoption of neoliberal policies (World Bank, 2000). Purchasing power has also decreased. Due to inflation, between 1988 and 1995 purchasing power for goods and services decreased 22.8 percent, and from 1995 and 2004 it decreased another 11 percent. In 2004, 562,000 families qualified as living in poverty, up 6,159 families from 1995 (Aguilar, 2006). According to the World Bank's Development Report (2000), the population that lived on less than one dollar a day rose 21.4 to 31.1 percent between the years of 1998 to 2000, and those who lived below two dollars a day increased from 45 to 58 percent respectively. These statistics indicate the conditions are slow to improve for the poor, even with neoliberal development. In this rapidly changing economy, people must either be able to participate in production and trade through traditional means, or leave their traditional lifestyle in order to receive a paycheck.

The following table represents jobs per sector between 1994 and 2004. Also included is the average monthly salary per sector.

Salvadoran Occupation According to Sector				
Table 4:1				
Sector	1994	2004	% Change	2005 Average Monthly Income (U.S.D.)
Total Population	5,372,673	6,756,786	25.8 %	
Total Number of Workers	1,950,998	2,526,363	29 %	
Armed Forces	1,629	6,176	279 %	\$375.81
Business Owners/Upper Management	44,433	27,598	- 38 %	\$940.96
Professionals, Intellectuals	56,048	71,424	27 %	\$659.76
Technical, Middle Management	105,982	197,285	86 %	\$399.52
Office Workers	88,503	129,803	47 %	\$309.84
Agriculture-Fishing Workers	238,983	177,661	- 26 %	\$174.56
Factory Workers	121,608	218,740	80 %	\$251.68
Unclassified Workers	649,325	830,648	28 %	\$133.96

(Encuesta de Hogares de Propósitos Múltiples. EHPM, 2006)

From 1994 to 2004, the country's population grew by over 25 percent. During the same time period, over one-quarter of the agricultural jobs disappeared. The decreasing number of agricultural workers indicates that the rural farmer is no longer able to grow corn and beans and compete in the national market, and that the Salvadoran population is more dependant than ever on food imports. Factory workers, office workers, and middle management positions increased substantially. This creates a situation where increasing numbers of people are dependent on purchasing food from a decreasing number of local producers and distributors. El Salvador is now a consumer of agricultural products, moving away from their historical role as a producer.

In 2005, 39.4 percent of the population was either unemployed or underemployed (EHPM, 2005). Greatly contributing to underemployment is the fact that business owners and upper management decreased by 38 percent. The decreasing number of business owners is contradictory to neoliberal claims of supporting small business. The armed forces have increased almost three times in size from post-war 1994. There is a growing need for trained military personnel due to growing organized crime and because El Salvador is the only Latin American country with government troops in Iraq. This further emphasizes their close relationship with the United States.

The rapid shift in occupations mirrors the shift in investment and governmental interest. Exports of agricultural products that averaged 62.3 percent of total exports during the war, fell to an average of 48.5 percent by 2001. Meanwhile, manufactured goods rose from 33.5 percent of total exports during the war, to 45.2 percent by 2001 (International Monetary Fund, 2005). According to the U. S. State Department, in 2005 El Salvador exported \$3.4 billion of products. These products mainly included textiles, light manufacturing, and coffee. At the same time, El Salvador imported twice that amount in products including consumer goods, food, capital goods, and raw materials. In 1998, El Salvador had a trade surplus of \$76 million (Hornbeck, 2003). By 2005, their trade deficit totaled \$3.4 billion. In seven years, El Salvador went from a country with a trade surplus to one that is dependant on foreign products with growing debt.

The U.S. Department of State concludes the economy of El Salvador continues to function with the \$2.8 billion added in remittances, which 22.3 percent of the Salvadoran population receive. There is a constant cycle of exchange between the U.S. and El Salvador in goods and currency. 43.3 percent of El Salvador's imports come from the

U.S. Many use their remittances to purchase these products, including food. In turn 60.7 percent of El Salvador's exports are sent to the United States (U. S. Department of State, 2007). It is questionable how long this type of trade can exist. At minimum the looming consequences of global warming and peak oil, along with rising emigration and crime, questions the sustainability of the neoliberal economic model. Also, if remittances do not continue, most Salvadorans would not be capable of purchasing foreign goods, which now includes their staple foods.

The situation in El Salvador mirrors that of other countries throughout the region.

Noam Chomsky (1999) writes in *Latin America: From colonization to globalization*:

The first principle is that U.S. foreign policy is designed to create and maintain an international order in which U.S.-based business can prosper, a world of "open societies," meaning societies that are open to profitable investment, to expansion of export markets and transfer of capital, and to exploitation of material and human resources on the part of U.S. corporations and their local affiliates. "Open societies," in the true meaning of the term, are societies that are open to U.S. economic penetration and political control. (p. 3)

Evidence indicates that instead of these nations gaining sovereignty, they lose control of their country's resources, workforce, environmental regulations, and ability to make decisions and change policy. "[Neoliberalism] has aggravated many of the region's most chronic problems--such as the pronounced degree of economic exploitation and social inequality that have characterized Latin America since it came under European colonial domination in the sixteenth century," (Harris, 1995, p. 279). There are many consequences for increasing poverty and decreasing income distribution, including increased suffering, migration, environmental degradation, centralization of power, crime, and violence.

Growing Discontent

It is true that there are people profiting from these trade policies, otherwise neoliberalism would not be so attractive to so many in political and economic power. The decisive questions are, does it benefit the poor majority, and is it environmentally and socially sustainable. Although it is argued that neo-liberal policies will benefit all people by “lifting all boats”, it is false to assume that the government of the United States or ARENA solely act on the best interests of the poor majority. U.S. involvement prior to and during El Salvador’s civil war clearly demonstrates their interests lay with pro-business leadership, first the oligarchy and then ARENA. In fact, the Reagan and Bush administrations provided military aid that averaged one million dollars per day from 1980-1992 in support of a right-wing government who committed 96 percent of the human rights violations during the civil war (Vilas, 1995).



Figure 4.2

A U.S. 500 pound bomb that failed to detonate during the war.

Suchitoto, El Salvador
Photographer: Robyn Wilson

President Saca claims,

CAFTA, as an instrument for regional security, was the missing link of the peace building and democratization project for Central America. The United States shares a long and dramatic history with the Central American countries in our quest for peace, democracy, freedom and stability. (University of Chicago, 2005).

If President Saca is correct, El Salvador should be experiencing a time of not only economic growth, but also social stability. However, overwhelming evidence indicates there is growing economic disparity, a decrease in services and opportunities, and growing social discontent.

Protests continue throughout the country over rising costs, privatization of health, services, and trade agreements. Demonstrations against the privatization of healthcare began in 2002. Since then there have been hundreds of protests (Valiente, 2006). While I was conducting my research the summer of 2006, there were several protests against the neo-liberalization of El Salvador. One protest on July 5th was against rising bus fares in San Salvador. The protest became violent as tensions rose in front of the National University. Protestors retaliated against the use of tear gas and thousands of rubber bullets that engulfed the streets, but knowledge of the assassination of two well-known leftists earlier that week also added to the aggression (Pullin, 2006). Two police officers were killed and ten others wounded as well as an undisclosed amount of civilians. Two days later, a nation-wide general strike and protest against free trade closed all of the major highways, borders, seaports and the international airport. Transportation between major cities was blocked by thousands of people and burning tires. Unlike the previous demonstration, this was a peaceful protest; however, these are examples of the rising tension and opposition to neoliberal policies and free trade agreements in the country.

Research on Neoliberalism

The Citizen Network for Development (SAPRIN) in El Salvador is a coalition of seventy major networks and organizations representing over five hundred groups ranging

in focus from environment, worker's rights, health, human rights, religious, economic and other interests. The conclusions from the first meeting were to investigate three main areas, and reconvene once they could establish conclusions. The three areas were: the impact of the privatization of public services primarily energy-distribution, the impact of labor-market flexibilization on workers, and the impact of liberalization of the financial system on access to credit by small-scale enterprises. SAPRIN Second National Forum was held in July, 2000 in San Salvador with nearly 250 representatives of different organizations. The results of the research stated that "the net impact of the economic policies in question was negative, although some positive results were recognized" (SAPRIN, 2000).

The SAPRIN investigation found privatization of the energy-distribution network reduced access to the rural poor, and induced increases in the price of goods and services that depend on electricity for production. Alejandra Castillo with the Committee in Solidarity with the People of El Salvador (CISPES) said, "If we take the electricity sector and telecommunications as guides, privatization has meant higher rates, lower quality, less access, and less sovereign control over our public services," (CISPES, 2007).

SAPRIN reported the labor-market increased flexibility policies include maintaining real wages at a very low, static minimum, decreased enforcement of the existing regulatory framework in order to reduce labor costs and stimulate employment, and the elimination or amendment of laws that do not contribute to labor flexibility. The research on the impact of increased labor-market flexibilization on workers reported increased job insecurity and higher underemployment. Unionizing has become more difficult and worker rights are increasingly violated. Moreover, these labor-market

policies have decreased real wages forcing more household members to find additional sources of income, including children who work instead of attending school (SAPRIN, 2000).

Finally, the SAPRIN report found the impact of the liberalization of the financial sector found that small and medium scale businesses have significantly less access to credit. Capital has been concentrated in fewer hands with investment focused on trade and services at the expense of domestic industry and agricultural production. The decreasing amount of agricultural workers indicates that the rural farmer is no longer able to grow corn and beans and compete in the national market (SAPRIN). This clarifies the reasons why the number of farmers is decreasing dramatically and restates the negative aspects of neoliberal policies.

CAFTA requires the privatization of goods and services, increases development and spending on infrastructure that benefits exportation, increases external debt, and decreases the country's sovereignty (Spotts, 2005). The Jesuit University of Central America (UCA) released a study that found 60 percent of the population predicts no improvement of poverty with the ratification of CAFTA. Even more interesting is that 100 percent of the richest people surveyed predict that CAFTA will improve poverty, while only 34.2 percent of the working class believes it will (Instituto Universitario de Opinion Publica, 2006). These statistics represent more than who agrees and disagrees with CAFTA, it indicates who is benefiting from it and who is not.

The USAID/El Salvador Annual Report (2003) states that even though the country has engaged in neoliberal policies for development, more than 50 percent of the rural population lives below the poverty line. "It is remarkable, however, that even after a

decade of steady growth, real GDP per capita has not yet climbed back to the 1975 levels. In real terms, the economy has yet to achieve the size it had 25 years ago, before the war,” (Marcia & Silvia, 2004). If the true goals of neoliberal development were as beneficial as described and actually improved the standards of living for everyone, there should be a decrease in poverty with eighteen years of engagement neoliberal policy. However, many statistics indicate increases in poverty and underemployment, further environmental destruction, and increasing crime, and emigration. For those who are not benefiting from neoliberalism, a sustainable alternative is necessary.

Fair Share

The Fair Share ethical principle includes the importance of limits to consumption, reproduction, and the redistribution of surplus. As people restrict their own needs and wants, they can set resources aside to further the principles of earth care and people care (Holmgren, 2002; Mollison, 1990). This ethic is based on the belief that we only have one earth, and we have to share it -- with each other, with other living things, and with future generations. This means limiting our consumption, reducing waste, and working towards the goal for everyone to have access to the fundamental needs of life (Holmgren, 2007).

Holmgren (2002) explains that it does not mean that we can solely care about ourselves in a desire to meet our own comfort. He states, “As we reduce our dependence on the global economy and replace it with household and local economies, we reduce the demand that drives the current inequalities. Thus “look after yourself first” is not an invitation to greed but a challenge to grow up through self-reliance and personal responsibility,” (p. 7). One way to take care of yourself and others is to value and focus

activities on non-material well-being. This is much different than the neoliberal philosophy. Bill Mollison (1990) writes, “Cooperation, not competition, is the very basis of existing life systems and of future survival,” (p. 2).

Holmgren emphasizes redistribution of surplus as central to the Fair Share approach. This principle requires people with surplus resources to help those beyond their intimate community of family and friends. Moreover, personal responsibility for others is the basis for responsible decision-making. All people around the world need to accept the responsibility for future generations. Many indigenous societies consider the consequences of their actions to affect seven generations in the future, and this is a concept integrated into the permaculture philosophy.

The ethic of Fair Share directs people to observe and interconnect with their surroundings, and make decisions that meet their needs, without harmful consequences. By combining sustainability with economics, people utilize local resources while not taking advantage of others. They value their surroundings and refrain from damaging the earth on which they depend for survival. Fair Share consists of an alternative to the current trend of material acquisition and materialism that is promoted among the neoliberal model and global financial institutions. People who work in permaculture can earn a profit, but it is in a sustainable manner that incorporates the ethical principles of care for the earth and people, as well as the bottom line.

Fair Share ~ IPES ~ An Alternative

The work of IPES is based on sustainability and nurtures the local environment and resources, including its very valuable human resources. The vision of IPES is to create sustainable communities that can act as beacons of light and hope for other

communities. Economic and ecological disaster are real possibilities in El Salvador. The more people who follow in ecological and sustainable practices, the stronger the local network will be, meaning fewer people will suffer if the economy does collapse. The more people who are trained in permaculture and ecological living practices, the more potential educators there are in case a large demand of them is needed. IPES engages in a different approach to development in El Salvador than the neoliberal model that embraces industrialization. During an interview with Karen Inwood, the executive director of IPES explained:

Permaculture is an alternative to that urban sweatshop road of development, which is what the government is promoting. It's to say that that kind of society, an urban industrialized society actually does not have a future, not just in El Salvador it's future is very uncertain around the world, because of the problems of peak oil, because of the overall environmental problems, problems of indebtedness of countries...the subject is huge. But permaculture shows another way of life which is much more sustainable and can exist into the future, and sustainable in a way that does not damage the very earth on which we depend for everything that we need as humans. (personal communication, June 23, 2006)

The institute provides informal education about the environmental, social, economic and political circumstances of El Salvador. They teach the people how to utilize the resources found on their own land in order to create a healthy ecosystem that their family can depend on for survival, improved nutrition and health, income generation, and environmental protection. Working with the whole family, IPES trains rural promoters to raise consciousness, teach empowerment, civic participation, ecological and sustainable agricultural techniques. This encourages dependence on local resources and community, as well as independence from foreign trade that may or may not be available in the future. Their practices increase production, instead of degrading their resources. Although the

situation in El Salvador appears overwhelming through statistics, the spirit of the people provides confidence that they will continue to strive for improved living conditions.

Conclusion

This chapter is an overview of the economic and political situation in El Salvador; however, it is just a small snapshot of a tiny, but complex and unique country. What this chapter establishes is that the people continue to live in poverty with few options. There are more rural schools, health clinics, and roads since the end of the civil war; however, eighteen years after the adoption of neo-liberal policies, the country continues to experience extreme poverty, inequality, and instability. Current economic policies focused on international trade instead of local interests provide few options for the agricultural and entrepreneurial sectors of society. One way to stimulate sustainable agriculture within the current economic atmosphere is to create markets for organic and local agriculture. Several organizations are focusing on this; however, there are currently few opportunities for distribution. Also, as more consumers become organically conscious on a global level, international trade may also increase the demand for organic agriculture. This would combine sustainable agriculture and economic growth, while decreasing the use and encouragement of destructive practices.

Currently, many people choose to leave their homeland in order to find income to provide a better life for their children. The environment is already at a state of severe degradation. The current plan of industrialization without environmental regulations causes further destruction of wildlife and human habitat. Without labor regulations, basic human rights will not be met. El Salvador already has an established global economy because of housing multinational corporations, engaging in international trade, and

receiving over two billion dollars in remittances annually. This international exchange will not change in the near future; however, an alternative is needed for those who would like to maintain their traditional way of life and provide a sustainable future for their families. Providing healthy diets, supporting the land on which they live, and generating income free of debt empowers communities by not depending on multinational corporations for survival. IPES provides some of the tools for them to provide a sustainable and healthy future for their families, but it is the Salvadoran people who make it an obtainable reality.

CONCLUSION

PERMACULTURE IN EL SALVADOR

When I arrived in El Salvador as a Peace Corps volunteer in May, 2000, I was in search of an alternative to neoliberalism. I had already left the international business profession, and needed a new direction in my life; however, I did not initially encounter an alternative in El Salvador. Instead I found a post-war country in a severe state of environmental degradation due to extensive deforestation and pollution. I experienced the power of natural disaster, and the resiliency and strength of the Salvadoran people amidst tragedy. I witnessed the perils of extreme poverty and inadequate distribution of wealth. My friends exposed me to well-developed, polarized perspectives of economic and political issues. I used that time to create new friendships and learn as much as I could, but I was still unclear about an overall strategy that would be beneficial to the land and the people in a very complex situation. What became strikingly clear was that the environment must be conserved, the poor are in dire need to improve their quality of life, and that the situation is urgent. It is urgent for El Salvador, but it is also urgent for millions, if not billions, of the poor around the world.

Once a person leaves the comforts of the United States or other over developed countries, it is obvious that the earth and people are in crisis and require urgent attention. Some people believe that neoliberal policies and industrialization are the answers to these problems, and that if they follow this path, they will have a similar quality of life as those in other industrialized nations. However, there are many who passionately disagree with this and realize that it is impossible for the world to sustain current levels of industrialization, let alone extend it to all countries. In Scientific American, Edward

Wilson (2002) concluded that a person's ecological footprint is determined by the average amount of productive land and shallow sea appropriated in bits and pieces from around the world for food, water, housing, energy, transportation, commerce, and waste absorption. A comparison between the ecological footprints of the world's average to that of an average U.S. citizen reveals that it is impossible for everyone in the world to consume that amount. The average ecological footprint is about 2.5 acres per person in developing nations and about 24 acres per person in the U.S. For every person in the world to reach present U.S. levels of consumption would require a minimum of four planet Earths. Neoliberal development is destructive and impossible for the entire world to sustain. There are a growing number of people around the world who realize that industrialization and neoliberal policies have not improved their quality of life, and are deciding to turn to alternative solutions. This sentiment continues to grow in El Salvador where protests against privatization, rising costs, and decreased agricultural opportunities are becoming more frequent.

During the same time period that I became more conscious of the urgent concerns of the world's poor, IPES built their educational center. In 2002, when I left El Salvador and first heard about permaculture, IPES became an independent non-profit organization with a well-established community base and well trained promoters. By 2005, when I began investigating organizations in El Salvador, they were well established and generously open to my research. I first received their three year project proposal and quickly realized that they were indeed practicing what I concluded would work in theory. In September of 2007, they will celebrate their five-year anniversary as an independent organization, and their growth has been steady.

There are many lessons to be learned about sustainable community development from their work. IPES is very different from other aid organizations in El Salvador for several reasons. The first reason why IPES is unique is because they successfully combine the philosophy of permaculture with the climate and culture of El Salvador. IPES focuses on the strengths of the environment and the people to produce a structure that addresses the immediate needs, while maximizing their potential. El Salvador is a tropical country that can be agriculturally productive with the proper ecological techniques. However, additional considerations such as frequent natural disasters and the severe degradation of the land are also factors to consider when devising an alternative to the conventional practices. Although much of what IPES teaches focuses on ecological agriculture, their true intention is to maximize individual and community potential. Their work addresses empowerment for the men, women, and children in communities. With proper skills and support, these people can free themselves from the cycle of dependency, improve their immediate environment, and their quality of life.

Another aspect that differentiates IPES from other organizations is that they do not offer large-scale projects. Karen Inwood explained to me that after the civil war, hundreds of organizations flooded the country in order to hand out houses, food, wells, and other development projects. Often these organizations would come into a community, build an expensive project and leave, creating in her words, “a culture of hand-outs” (personal communication, June 22, 2006). Many of these organizations have left the country. IPES takes the opposite approach. IPES teaches skills that the communities apply to their own land in order to improve their quality of life. Sometimes community members will come to them and say that other organizations have given them

large-scale projects. Inwood described to us, "...this is a school more than anything else. You don't go to your school and ask them for money, do you?" (personal communication, June 22, 2006). Former Salvadoran President Francisco Flores now lives in Miami, Florida and is the founder of the America Libre Institute, a Washington-based think-tank. During a speech in Grand Rapids, Michigan in 2005 entitled, "El Salvador's Secret: Freedom and Opportunity Cure Poverty", Flores describes his perception of poor countries.

...I am sure you have heard "Poor countries are poor because rich countries impoverished them," or the historical version which goes, "We were enslaved and our national wealth was stolen." And let's not forget the most prevalent today, which is, "Rich nations keep poor countries poor by draining their resources."... I have no patience with this because it is my experience that this perspective is the reason why many nations are unable to develop a successful strategy against poverty. El Salvador's success is simple: It stopped blaming others. (Flores, 2005)

Although President Flores brings up several controversial points, he is correct in stressing the need to acknowledge and act upon personal responsibility. However, responsibility should not be limited to poor countries or to the topic of the economy.

The philosophy of IPES is to educate people about how to provide for their own needs, so that they are more prepared to solve their own problems in the future. As Inwood explained to me, the promoters begin their preliminary meeting in a community by explaining that the environmental conditions that they live in are their own fault. They emphasize personal responsibility and that blaming others will not solve their problems. The promoters stress that if they want to live and work in a more stable environment, provide nutritious foods for their family, and free themselves from debt, they will have to do it on their own. IPES is an organization dedicated to sharing knowledge and skills with people who are committed to learning them, rather than an

organization that attempts to solve problems for the communities. A foundation of sustainability is personal investment, which creates deeper understanding and commitment.

Sustainable community development is not something that happens overnight, and a subject such as permaculture requires years to implement with proper training. Even though this is a long and slow process that requires a lot of effort, training, and dedication, a growing number of communities are coming forward to request this education. IPES has grown to include thirty-three communities. It is projected that in the next two years a total of one thousand people will be practicing ecological farming methods, affecting five hundred families, and eighteen new communities will join the Farmer to Farmer Movement (Inwood, 2005). These numbers are impressive for a four-year-old organization that functions on a current annual budget of \$120,000; however, there are millions of rural agricultural people in El Salvador.

The work of IPES has proven effective, which provides guidelines for successful sustainable development in this region. But in order for it to reach more people, more quickly, a nation-wide effort is required either by the Salvadoran government and/or other non-governmental organizations (NGOs). Through my experience and research, I believe that IPES is one of the best examples of sustainable development in El Salvador. Other organizations share many traits with IPES, and if these organizations increased their communication and aligned their strategies, the people and environment of El Salvador would benefit. A current example of this is that the Peace Corps and IPES are forming a relationship in order to utilize the strengths of each organization. IPES is

providing training to Peace Corps trainees and will in turn receive volunteers who will live in some of IPES' communities offering continual support.

I also propose that the Salvadoran government should support rural ecological agriculture, whether they are ARENA, FMLN, or other political persuasion. Although Nicaragua and Cuba have their own unique situations, these countries offer evidence that ecological agriculture can experience widespread success, once the government supports the Farmer to Farmer Movement and other agricultural support. Regardless of a person's stance on neoliberal development, it is in the best interest of the entire country if the rural poor can provide a decent quality of life for their families, while also improving the land. Severe poverty and dependency does not create the most stable or productive society. Also, ecologically managed land has proven more resilient to natural disasters, which are on the rise (Intergovernmental Panel on Climate Change, 2007).

Sustainable living and ecological agricultural practices are not only important for a country in crisis, such as El Salvador, but for every country in the world. There is sufficient evidence that suggests that fossil fuel based industrial practices are causing global warming. Genetically Modified agriculture could potentially cause the collapse of the food supply. Peak oil may lead to the dissolution of the international trade system, and make agricultural petrochemicals unavailable. The increasing number of wars fought for resources combined with the rising number of countries with nuclear weapons creates a world of significant volatility. These are some of the consequences that we may witness in our lifetime. Permaculture may prove to be one of the philosophies that will save people's lives. In fact, I believe it already has.

This thesis is a record of permaculture in El Salvador, but I hope that it is also guide for anyone who wishes to make sustainability a priority in their life.



Figure 5:1

Mural: Traditional Agricultural Life
Perquin, Morazan, El Salvador
Photographer: Robyn Wilson

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Appendix A

Rising Social Concerns

Migration

Although there are other concerns in El Salvador, the two issues of migration and *Mara Salvatrucha* produce sufficient evidence that the country is in an urgent state demanding a sustainable alternative. It is estimated that up to 2.7 million Salvadorans live outside of El Salvador, 90 percent of who reside in the United States (UNDP, 2005). Many left during the civil war, however a growing number are fleeing the country to move the United States in order to obtain employment and send money home to their remaining family. This is required so that they can survive extreme poverty. In 1990, about 500,000 Salvadorans lived in the U.S., in 2000 that number rose to a minimum of 800,000, up 61 percent and the actual number may be much higher (US Census 2000).



Figure A:1

Billboard, San Pedro
Masahuat, La Paz

Translation: Invest your
remittances wisely. Construct
with Zinc -Aluminum
material. The new roof of El
Salvador.

Photographer: Robyn Wilson

The 2005 United Nations Development Program's Human Development (UNDP) Report for El Salvador focused on migration. It found that although El Salvador is experiencing a hemorrhaging of their most valuable resource, their human labor force, not all of the consequences are negative. The Development Report states that

Salvadorans in the U.S. send home over \$2.6 billion annually, accounting for 17.1 percent of GNP. In 2004, 362,189 families received remittances. Although remittances are often used for daily life, some people have chosen to improve their quality of housing, ensure their children receive higher education levels, and provide a retirement fund for the elderly. Without remittances, it is believed that the Salvadoran dollarized economy would collapse. However, these benefits also bring consequences. Housing is often modeled after the style in the U.S., which is often not appropriate in Salvadoran communities due to environmental limitations and infrastructure. Better-educated youth often lose inspiration to continue traditional rural life and relocate in order to find employment. However, as people move to the already crowded cities, young people often discover that there are not professional jobs for them, therefore they are either underemployed or decide to migrate to the north causing a “brain drain” situation.

A very small percentage of people receive visas, therefore many look for work to support their families as undocumented workers. Men and women leave their families, travel north through Mexico and cross the border through the *Rio Brava* or the deserts of the southwest. Often the migrants pay *coyotes* (human smugglers) thousands of dollars for transport, obtained through selling their possessions and livestock or mortgaging their land title (UNDP, 2005). In the United States as an undocumented worker, they have few options, no rights and are typically underemployed. There are no laws to protect them from abuse or crime in an increasingly unfriendly environment and it is impossible for them to return to visit their homeland and family, unless deported.

Social costs include the long-term separation of spouses, children lose their immediate family members and are raised by extended family, and the elderly lose their

support network of family. There is also a shift in the male to female-headed households. The United Nations Development Report states that households headed by women rose from 26 percent in 1992 to 32 percent in 2004. In communities that receive a high amount of remittances, women greatly outnumber the men. However, these changes have not noticeably influenced gender-roles in the communities. Men continue to be considered the generators of income, and women responsible for domestic duties such as the children and household. However, this does present an opportunity for change if the women choose to engage in community organization, and positions of leadership.

Mara Salvatrucha

Another manifestation of migration and poverty is the gangs of *Mara Salvatrucha* (MS). MS consists of over four hundred fractions; the most powerful are called 13 and 18. They compete for territory in a growing number of countries, but are most prevalent in El Salvador. The gang started in the streets of Los Angeles in 1994. During the civil war from 1980 to 1992, thousands of Salvadorans fled to the United States in exile. Although they relocated in many states, a large portion moved into the inner city of Los Angeles. Because the youth were exposed to violent street gangs native to L.A., they formed their own in order to protect their families. Some of the refugees were previously paramilitary and received formal training in the use of explosives and arms as well as war tactics. As their violence became more horrific, the Clinton administration decided to deport these felons back to El Salvador. Without a criminal record at home, they are set free. Pedro Gonzalez, the police chief in charge of gang violence in El Salvador stated,

“Las pandillas no nacieron aquí, sino nació en Los Angeles. Ahí comenzó el problema para El Salvador,” (La Prensa Grafica, 1996)¹⁰.



Figure A:2
Declaration of a
community controlled by
Mara Salvatrucha.
“Welcome to the barrio.”

San Pedro Masahuat, La
Paz

Photographer: Robyn
Wilson

There are over twenty-five thousand gang members in Central America. They commit acts of violence, extortion, and profit off of the black market. The growth of *maras* in El Salvador is largely due to the neoliberal economic policies introduced after the peace accords as well as the chronic incapacity of the State to address poverty, inequality and exclusion in the distribution of economic, political and social resources (Moser & Winton 2002). The generation of conditions that support crime and violence increase when inequality and poverty overlap. Delinquency has its origins in economic and social conditions, where there is high incidence of poverty, inequality and poor basic services (Becker 1968). The U.S. Embassy considers El Salvador a critical crime-threat country. The homicide rate in the country increased 25 percent from 2004 to 2005, giving El Salvador one of the highest homicide rates in the world (U.S. Department of State, 2007b). The citizens are afraid as the gangs grow larger and more powerful. However,

¹⁰ Translation: The gangs were not born here, they were born in Los Angeles. That is where the problem started for El Salvador.

more military and prisons will not solve these problems. Long-term solutions that directly confront economic stratification are urgently needed.

Appendix B

Free Trade Agreements

Neoliberalism thrives through trade agreements. A brief explanation of two of the central organizations aids in understanding the free agreements. This is important to the discussion of economics in El Salvador because they were the first to ratify the Central American Free Trade Agreement. The World Trade Organization (WTO) is based on the General Agreement on Tariffs and Trade (GATT) established in 1948. The last GATT round, called the Uruguay Round, established the creation of the WTO in 1995. It now consists of 150 countries. It is an organization that aids in the liberalization of international trade by serving as a negotiating forum, providing a set of rules, and helping to settle disputes. The WTO website lists their perspective of the ten benefits of liberalization; these include: the system helps promote peace, disputes are handled constructively, rules make life easier for all, freer trade cuts the costs of living, it provides more choice of products and qualities, trade raises incomes, trade stimulates economic growth, the basic principles make life more efficient, governments are shielded from lobbying, and the system encourages good government (WTO, 2007).

The International Monetary Fund (IMF) is an organization that was established in 1945 to promote the health of the world economy. It has a current membership of 184 countries. It is responsible for promoting international monetary cooperation, facilitating the expansion and balanced growth of international trade, promoting exchange stability,

assisting in the establishment of a multilateral system of payments, and making its resources available to members experiencing difficulties (IMF, 2007). These two organizations act in a complementary and cooperative fashion to promote international trade liberalization (Siegel, 2002). Together, but in different capacities, they are responsible for maintaining the already existing trade agreements and creation of those that are still in the planning stages.

NAFTA and Mexico

A brief examination of Mexico ten years after the North American Free Trade Agreement (NAFTA) between Canada, Mexico and the United States, may provide a glimpse into the future of the Central American Free Trade Agreement (CAFTA) participants. NAFTA began in 1995. Some statistics about economic growth in Mexico provided by the Environmental Working Group indicate that the free trade agreement may seem beneficial to the Mexican population, such as the 7 percent increase in exports and the 6.7 percent increase in imports between 1994 and 2001 (EWG, 2007). One of the stipulations of these free trade agreements includes trade of agricultural products without tariffs or restrictions on genetically modified food mass-produced by huge farming corporations. According to the Institute for Agriculture and Trade Policy, the United States directly subsidizes corn an average of \$4.5 billion a year and soy \$2 billion a year (IATP, 2007). U.S. farm subsidies significantly reduce the production costs. Mexican subsistence farmers are unable to compete and are not only losing their livelihood, but also a part of their heritage as corn is tightly linked to indigenous traditions and

spirituality. One of the main complaints against Free Trade Agreements is the unfair agricultural policy between the rich and poor countries.

Rural poverty in Mexico is on the rise and wages are decreasing. Purchasing power among the poor has decreased and inequality among the rich and poor is more evident. According to Gisele Henriques (2003), even though corn prices have fallen, the price of tortillas increased 279 percent. Free trade arrangements have created a race for industrialization based on who will work for the least amount, without labor rights, or minimum environmental standards (Brecher & Costello, 1998). Since the implementation of NAFTA, there has been a net loss of over a million jobs in the U.S., while Mexico lost 1.3 million in the agricultural sector alone. Another indicator of the consequences of NAFTA is the amount of people fleeing the rural areas to move to the metropolitan areas or abroad. In 1990, 2.4 million Mexicans were known to have migrated to the U.S. compared to an estimated 11 million in 2005, 57 percent of them are undocumented (Migration Policy Institute, 2007). Immigration will continue to increase as long as the economic institutions that have altered the ability of families to feed themselves and maintain their traditional way of life continue. CAFTA closely resembles NAFTA, and many of the same consequences are expected in Central America. As CAFTA ages, the United States will host an increasing amount of undocumented Central Americans as they search for income.

Appendix C

Timeline: El Salvador **A chronology of key events** (BBC News, 2007)

1524 - Spanish adventurer Pedro de Alvarado conquers El Salvador.

1540 - Indigenous resistance finally crushed and El Salvador becomes a Spanish colony.

1821 - El Salvador gains independence from Spain. Conflict ensues over territory's incorporation into Mexican empire under Creole general Agustin de Iturbide.

1823 - El Salvador becomes part of the United Provinces of Central America, which also includes Costa Rica, Guatemala, Honduras and Nicaragua.

Independence

1840 - El Salvador becomes fully independent following the dissolution of the United Provinces of Central America.

1859-63 - President Gerardo Barrios introduces coffee growing.

1932 - Some 30,000 people are killed during the suppression of a peasant uprising led by Agustine Farabundo Marti. *La Matanza* (The Masacre)

Civil war

1961 - Right-wing National Conciliation Party (PCN) comes to power after a military coup.

1969 - El Salvador attacks and fights a brief war with Honduras following the eviction of thousands of Salvadoran illegal immigrants from Honduras.

1977 - Guerrilla activities by the left-wing Farabundo Marti National Liberation Front (FMLN) intensify amid reports of increased human rights violations by government troops and death squads; General Carlos Romero elected president.

1979-81 - Around 30,000 people are killed by army-backed right-wing death squads.

1979 - General Romero ousted in coup by reformist officers who install a military-civilian junta, but this fails to curb army-backed political violence.

1980 - Archbishop of San Salvador and human rights campaigner Oscar Romero assassinated; Jose Napoleon Duarte becomes first civilian president since 1931.

1981 - France and Mexico recognize the FMLN as legitimate political force; US continues to assist El Salvadoran government whose army continues to back right-wing death squads.

1982 - Extreme right-wing National Republican Alliance (Arena) wins parliamentary elections marked by violence.

1984 - Duarte wins presidential election.

1986 - Duarte begins quest for negotiated settlement with FMLN.

1989 - FMLN attacks intensify; another Arena candidate, Alfredo Cristiani, voted president in elections widely believed to have been rigged.

Peace and natural disasters

1991 - FMLN recognized as political party; government and FMLN sign UN-sponsored peace accord.

1993 - Government declares amnesty for those implicated by UN-sponsored commission in human rights atrocities.

1994 - Arena candidate Armando Calderon Sol elected president.

1997 - FMLN makes progress in parliamentary elections; leftist Hector Silva elected mayor of San Salvador.

1999 - Arena candidate Francisco Flores beats former guerrilla Facundo Guardado in presidential election.

2001 January, February - Massive earthquakes kill 1,200 people and render another one million homeless.

2002 July - US court holds two retired, US-based Salvadoran army generals responsible for civil war atrocities, orders them to compensate victims who brought case.

2003 August - 360 Salvadoran troops dispatched to Iraq.

2003 December - El Salvador - along with Honduras, Nicaragua, Guatemala - agrees on a free-trade agreement with the US. The government ratifies the pact in December 2004.

Saca presidency

2004 March - Arena candidate Tony Saca wins presidential elections against FMLN leader Schafik Handel.

2005 March - OAS human rights court votes to re-open an investigation into the 1981 massacre of hundreds of peasant farmers in the village of El Mozote, regarded as one of the worst atrocities of the civil war.

2005 October - Thousands flee as the Ilamatepec volcano, also known as Santa Ana, erupts. Days later scores of people are killed as Tropical Storm Stan sweeps through.

2006 January – FMLN leader Schafik Handel dies. 100,000 attend funeral procession.

2006 March - El Salvador is the first Central American country to implement a regional free trade agreement with the US.

2006 April - El Salvador and neighboring Honduras inaugurate their newly defined border. The countries fought over the disputed frontier in 1969.

2007 January - 21 inmates are killed in a riot at a maximum-security prison west of the capital.