The Economic Change, Poverty and the Environment Project (ECPE) was initiated in 2000 as a sustainability program under the aegis of the World Wild Fund for Nature’s (WWF) Macroeconomics for Sustainable Development Program Office. The program was implemented over four years in the rural areas of five developing countries: El Salvador, China, Zambia, Indonesia and South Africa. Project partners for participation in the program were either WWF offices or local development/environmental organizations. In El Salvador it was The Salvadoran Research Programme on Development and Environment (PRISMA for its Spanish initials). The European Commission, the Dutch Ministry of Development Cooperation and the Swedish International Development Agency funded the ECPE project.

The El Salvador ECPE project began in 2001 in the micro-region of La Montañona, in the department\(^1\) of Chalatenango. In Phase I of the project the impact of globalization and Salvadoran macro-policies of the past two decades were analyzed, and Gómez et al. published the findings in the report *Rural Poverty and the Environment in El Salvador: Lessons for Sustainable Livelihoods*. During Phase II of the project, the local poverty-environment dynamics in the La Montañona micro-region was examined with the help of a literature review and fieldwork in the area.

The main focus of this analysis is the ECPE project—its objectives, various findings, activities and critical assessment for sustainability. The analysis additionally describes a diverse range of efforts at creating sustainable living by the residents of La Montañona population before the ECPE project started.

**Background**

**Chalatenango**

Chalatenango, one of the fourteen departments of El Salvador, lies in the northeast of El Salvador, on the border with Honduras. It is one of the poorest regions of the country. Health services and educational opportunities in the department have always been insufficient. The high, rugged mountains isolate Chalatenango populations from the rest of the country. Throughout the history of El Salvador, this region has not received much capital investment, and agricultural methods have remained primitive. Moreover, because of the mountainous topography, there is not a sufficient amount of arable land. Over many decades land shortages and poor quality soil have been serious problems in this area forcing the residents (especially men) to travel to other parts of the country in search of seasonal work in sugar, cotton and coffee harvests (Peterson, 11-12).

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\(^1\) Geographical and administrative subdivisions in El Salvador are called ‘departments’.
Right before and during the twelve-year (1980-1992) civil war in El Salvador thousands of Chalatenango residents had to leave their homes and land to escape death and destruction. They fled to Honduran villages across the border. Most were accommodated in refugee camps. The population in the war-stricken rural areas of Chalatenango decreased dramatically from 700 thousand in 1971 to 350 thousand in 1981 (Peterson, 53). After living in refugee camps for several years the residents of Chalatenango started returning to their land to rebuild their lives. The first mass repatriation was in October of 1987. Since then the returning populations have worked at creating unique communities that exemplify many principles of environmental and community sustainability.

La Mancomunidad of La Montaña

The micro-region of La Montaña in Chalatenango is made up of seven municipalities. Since 1998 these municipalities have come together in an association, the Mancomunidad of La Montaña. The area of this micro-region is 335 square kilometers, and it has a population of 51,124 (1992 census), of which 55 percent are rural. It is a hilly area with elevations from 300 to 1648 meters above sea level (Kandel et al., 94). The climate ranges from tropical savanna (dry season in winter) to humid tropical forest climate. The region has mountain soils and clay loams of volcanic origin (Agroecology). Forests cover the northwestern areas. Fifteen streams in the forested area nourish five important rivers, four of which discharge into the Cérron Grande hydroelectric dam reservoir, the most important source of electricity for the country (Gijsbers, 4). Residents of San Salvador (over one million people) directly depend on the watershed management in these highland communities. Therefore, if the government agrees, the compensation of environmental services could create an alternative income for the micro-region (Reed 2002, 6). In the eastern parts deforestation and land degradation pose problems. Generations of intensive farming on steep hillsides and extensive cattle raising on degraded pastures have led to topsoil loss. La Montaña has potential for ecohistoric tourism because it is a scenic area and many sites in the mountains bear witness to the civil war.

Objectives of the ECPE

The El Salvador ECPE project had two main objectives:
1) To analyze the dynamics between the rural poor and the environment in specific localities in La Montaña;
2) To develop and strengthen interventionary strategies for sustainability at the micro (local), meso (regional) and macro (national) level.

I) Analysis of the Poverty-environment Dynamics

The analysis of the local poverty-environment dynamics began with a study of the recent macroeconomic policies in El Salvador and their impact on the agricultural sector and the rural poor.
A) Impact of Macro-policies

La Montañona, like many other rural areas in El Salvador, has been adversely impacted by the macroeconomic policy framework of the 1980s that had a strong anti-agrarian bias. Structural adjustment policies, in place since 1989, have not been able to reverse this trend. The focus of these policies has been trade liberalization and the creation of an import-intensive, urban-based economy that favors labor-intensive exports produced in maquila2 industry and the rapidly expanding financial sector (Green, 242). Thus a narrow segment of the population has benefited and become richer while the majority of the population—landless peasants, small farmers, service-sector workers, public employees and small-business owners were left out (Rubio, 2). The falling real agricultural wages, declining real prices of staples (maize and beans) produced by subsistence farmers, and eroding employment opportunities in agriculture all indicate a crisis in the agricultural sector (Kandel et al., 97). Rural poverty figures are extremely high in this country. In 2001, 66.4 % of rural people lived in poverty and 35.8 % of rural households were in extreme poverty (UNDP, 2001). In 2003, 48.3 % of the total population lived below the national poverty line (UNDP).

The Land Transfer Program (PTT) that was part of the 1992 Peace Accords distributed a total of 401,232ha (a fifth of the national territory) amongst 120,597 beneficiaries. Of these beneficiaries, 37,000 were organized in cooperatives and received 5.8ha/beneficiary; 47,000 received individual plots averaging 1.7ha; and 36,597 received an average of 2.9ha/beneficiary. These figures were far below the 12ha, estimated by a World Bank study report as the required land size to lift a rural family out of poverty. Moreover, despite improved access to land, in mid-1990s there were about 350 thousand people in rural areas who were landless or land-poor (Gómez et al., 7).

Migration has been one important strategy of the rural households to deal with the economic adversities. Approximately 20 percent of the Salvadoran population is estimated to have emigrated abroad, mainly to the U.S. (Lauria-Santiago and Binford, 10). The annual remittances of the migrants have reached $ 2 billion, four times the net income from the maquila industry. These transfers are an important source of income for the families that receive them. For those who receive remittances, the funds represent 40-60 % of total household income (Rosa, 2004 as cited in Kandel at al., 98).

B) Livelihood Strategies in La Montañona

The ECPE fieldwork of Phase II focused on three communities within and around La Mancomunidad of Montañona: The municipality of Las Vueltas, the cooperative and community of Vainillas and the community of La Montañona3. As a first step for

2 The maquila or assembly industry operating in free trade zones has been growing at a fast rate in El Salvador. By 2000, maquila was the single largest export earner, bringing in $ 1.6 billion. However, the net income of the 65 thousand people employed in the factories was only $ 456 million (Green, 242).
3 La Montañona is the name of the micro-region as well as the forested mountain-top and the community that lives there.
exploring the livelihood strategies, ECPE’s project partner PRISMA collected data in the highland communities of Chalatenango, focusing specifically on the development and social organization of the La Montañona communities. Government agencies and the mayor’s office already had some consistent data sets. Therefore PRISMA’s research examined qualitative aspects of social capital formation. Interviews and rural rapid appraisals were conducted with focus groups such as subsistence farmers, handicraft artisans, residents and community board members.

The Land Transfer Program had redistributed around 500ha of forested land to ex-combatants and peasants who were displaced by the civil war. In addition some peasants had occupied land that had been abandoned during the war. At the end of 1990s, 76 percent of the peasants owned less than 2ha. More than half of the farmers had to rent land to plant basic grains because small plots granted under the PTT often could not provide for a family’s subsistence (Kandel et al., 100; Peterson, 63).

The Las Vueltas Community

Las Vueltas was one of the areas where the first returnees from the Honduran Mesa Grande refugee camp settled in October 1987. The town of Las Vueltas had been abandoned during the war. The repopulators were supported by various local and international NGOs. When they first returned they were confronted with very harsh conditions. The whole area was torn by the war and there was no infrastructure whatsoever. The people lacked basic services such as electricity, clean water, sewers, roads, health services and schools. They had to build houses and roads, dig wells, set up sewage systems and install pumps. They had few resources but lots of hope and determination to rebuild a new future and new communities. They accomplished the very difficult task of rebuilding their communities by working in cooperation. For example, while they were constructing houses, one team cleared the vegetation, another buried the concrete blocks and yet another built the wooden frames. As a result of this cooperation they built seven two-room houses each week (Peterson, 60).

Some beneficiaries of the Hacienda La Montañona land transfer (described below), members of CORBELAM (Committee of Land Reform Beneficiaries of La Montañona) also live in Las Vueltas because their plots are located within the forest and cannot be used for agriculture. 84 percent of peasants own very small parcels of 0.35-0.70ha, and the land is mostly degraded as a result of erosion (Kandel et al., 101).

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4 Social capital is defined as “multiple organizations and means by which social groups work together in pursuit of shared objectives” (Reed 2005, 14).
5 CRIPDES (Christian Committee for the Displaced of El Salvador) organized the first return. This NGO later took on the new mission of organizing with rural communities for a movement of social/economic development and justice. Its new name became The Association of Rural Communities for the Development of El Salvador (CRIPDES website). PRODERE (Programme for Displaced Persons, Refugees and Returnees in Central America) a multi-disciplinary, multi-agency UN program was funded by the government of Italy and implemented between 1990-1995. It has contributed to Salvadoran communities by various activities such as documentation of individuals, securing property titles, creation of communal financial committees, and production of basic grains after twelve years of war (PRODERE website).
For Las Vueltas peasants corn and bean cultivation has continued to be the main agricultural production. According to a case study of Las Vueltas by Barry Shelley (cited in Kandel et al., pp.101-2), only about 1.8 percent of Las Vueltas households cultivate non-traditional crops. Shelley explains that the absence of agricultural diversification is often attributed to lack of information and technical assistance, limited access to credit, insecure land tenure and aversions to market risk. He argues that in the Las Vueltas case, these factors have not played a role. Many NGOs are active in Las Vueltas; therefore the community has access to considerable information and technical assistance. Survey results show that about 80 percent of the households think they would be able to get loans if they wanted. So getting credits is not a problem. Survey results also convey that 83.6 percent of households own land and only very few fear that there is a danger of losing it.

Shelley concludes that the reason why Las Vueltas households have not diversified their crops is their concern for food security. These peasants have observed that fellow campesinos who participated in small farm programs for sustainable and diversified agriculture on hillsides did not receive significantly higher returns. Thus, prioritizing food security, they have stuck with the cultivation of staple grains. Some households might do some commercial vegetable farming on the side, but only after securing the food that the family needs. The lesson from Shelley’s case-study was valuable for the ECPE facilitators—that any effort attempting to diversify agricultural production must take into account peasants’ concern for food security.

The Vainillas Community/Cooperative

This community/cooperative is made up of farmers and ex-combatants. Cooperative organization has a rich history in Chalatenango dating to the first organizations at the end of the 1960s, and current attempts have been mostly successful. Cooperatives teach residents various skills and produce goods needed in the area and in other communities (Peterson, 48). Following the war and after many negotiations, the Vainillas Cooperative bought land from a person that owned around 1550ha. Some 366ha were distributed to 93 individuals. The beneficiaries were Cooperative members and other landless peasants. Currently due to resale or voluntary waiving of rights, only 82 families have land and 55 of these are active members of the Cooperative. Some of the land is put aside for common use such as common forest, the common productive land, and land for housing and private production (Kandel et al., 103).

The Vainillas community has been pretty successful in adopting sustainable agricultural practices. First of all, they were able to diversify their crops. They cultivate many vegetables (peppers, loroco, green beans, cucumbers, corn, onions, tomatoes, pumpkins and carrots), tubers and fruits on both the common land and individual plots. A limited amount of coffee is also grown on some individual plots. They are aware of the harmful effects of chemical fertilizers on human and ecological health. Therefore they use alternative pesticides and agrochemicals such as vinegar. Instead of using toxic pesticides the farmers get periodical training sessions from a national NGO to learn alternative ways for managing pests and weeds. Because of their commitment to reduce toxic pesticide use
the community has rejected or reoriented some national and international agricultural programs that focus heavily on pesticide use (Agroecology). They preserve the forest, clear out infected trees, and sell fallen trees. They are careful to preserve the soil by building small canals to reduce water flows, and by terracing with rocks and plants. Some of the members of the community go to San Salvador and Chalatenango to earn supplementary incomes as construction workers, maids or agricultural laborers. There is very limited migration out of Vainillas. According to Kandel et al., this may be because of the strong ties in the community and better incomes due to diversified agriculture. The authors also argue that the organizational structure of the community and better soils might have led to successful diversification and conservation practices (Kandel et al., 103).

The Community of La Montañona

La Montañona (“big mountain”) village was created in 1993 through the Land Transfer Program as a result of the distribution of the Hacienda La Montañona (La Montañona Farm) to tenants and ex-combatants. The community had 35 families originally but only 13 remain (Kandel et al., 103). These settlers had to work very hard for years to build the infrastructure, houses, latrines, an elementary school a community center and a soccer field, and to have electricity and potable water. They worked with national and international NGOs but were very careful that the decision-making process remained in their control (Peterson, 97).

However, the residents have not achieved much improvement in their living conditions over time because most of the La Montañona land is not suitable for subsistence agriculture. They have tried to secure their food by combining the cultivation of vegetables and wild spikenard at higher altitudes with the growing of corn, beans and chicken food on lower areas. Nevertheless the village has lost a lot of people to migration abroad. The remittances sent by the migrants subsidize the remaining members of families and in some cases they are used to start small businesses like shops and transportation services. Eco-historic tourism is another survival strategy that the community is exploring.

Conclusions of the Preliminary Analysis

The preliminary research and fieldwork yielded the following conclusions:

1) Food security is the main concern of households in all three communities of the micro-region of La Montañona.
2) Households will diversify agricultural practices only after they secure subsistence food and only if the returns from diversified agriculture are high.
3) Communities that implement the social organizational structure of cooperatives and have richer soil do much better.
4) Migration abroad is still one important survival strategy for communities that have not been able to improve their living standards.
5) Remittances from migrants improve living conditions of those who stay in the communities and may help start some alternative initiatives.

6) Possible alternative livelihood initiatives could be listed as follows: CORBELAM could manage the forest for small-scale commercialization of lumber and compensation for water provision services. Eco-tourism in the region could increase the sale of hammocks by women’s groups if some marketing help is given to the women. In areas where compensation for environmental services cannot be obtained, richness of crafts and cultural activities can get additional revenues (Kandel et al., 116).

7) Micro-institutional organizations such as the Environmental Committee of Chalatenango (CACH), the Technical Unit of the Mancomunidad and the Board of the Mancomunidad have been very successful in mobilizing local social capital during the postwar construction period. However, they have not been as effective in forming links with the market sphere, and therefore remain dependent on donor agencies.

8) The poorest people in the micro-region such as the landless peasants and subsistence farmers are for the most part absent from decision-making and excluded from meso-regional networks.

9) The current macroeconomic policy framework in El Salvador creates major obstacles for these communities because of leading to low agricultural prices and low wages.

Evaluating the findings of the preliminary research the ECPE project facilitators decided not to focus on farming. Rather, the goal would be the creation of alternative livelihood opportunities and environmental conservation initiatives. These strategies were to be carried out at the micro, meso and macro levels (Kandel et al., 106).

Available Resources of the La Montañona Communities

The communities in this micro-region have some important assets that will enable the implementation of sustainability strategies:

1) They have well-developed social capital and a rich history of social organization. They have managed to survive under the harsh conditions of a civil war, in refugee camps, and have rebuilt their lives from scratch when they resettled. They lacked financial and physical capital and natural capital was often insufficient. But they survived by pooling resources and joining in communally driven activities. The impressive number of communal-level and territorially grounded organizations is an indicator of the rich social capital.

2) PTT has resolved some of the land tenure problems in the micro-region.

3) The micro-region has some natural assets that can be leveraged to create alternative sources of income.
II) ECPE’s Three-level Sustainability Strategies

A) Micro-level Activities

1) Workshops were conducted to identify livelihood strategies. The young people of the micro-region were trained in research methodologies and basic concepts such as environmental services, rural livelihood strategies and territorial planning. Three of them were selected to co-facilitate workshops.

2) PRISMA and the Mancomunidad of La Montañona conducted an analysis of Vegetation Cover and Land Use Evolution.

3) A flora inventory of CORBELAM’s forest was completed with the help of community members. La Laguna Botanical Garden in San Salvador (specialists in botanical research) provided training for collection and classification of specimens and organized the classification of all the collected species.

4) A study on the Demand for Recreational Services in La Montañona Forest was carried out with the assistance of high school students.

5) PRISMA arranged a visit by forest technicians from the Lempira Sur Project in Honduras to identify ways of combating the pine weevil plague that damage the pine forests. A Forest Management Plan was developed.

6) Land use planning workshops were conducted for community leaders and municipal officials. Workshops for Environmental Units of Production and Sustainable Management of Natural Resources (UAPM) explored possibilities for higher gender participation. The topics of environmental management and compensation for environmental services were examined in workshops for the Environmental Committee of Chalatenango (CACH).

7) PRISMA and the Technical Unit of the Mancomunidad conducted workshops on managing the micro-region’s water systems. The goal was to develop a pilot project that would be sponsored by the Swiss Development Cooperation.

8) Efforts were made to build coalitions and connections among local entities. Members of the community were encouraged to reflect strategically on their issues to come up with advice and recommendations to the meso-level institutions.

B) Meso-level Activities

1) A coordination committee, the Roundtable in Support of the Mancomunidad of La Montañona, was established. It coordinated activities to attract new donor assistance, integrate the aid agencies into existing activities. Strategic planning was one main focus. Members included local representatives such as the Presidents of the Mancomunidad and the Technical Unit of the Mancomunidad, delegates from foreign aid agencies working in the micro-region such as the Swiss Development Cooperation and national NGOs such as PRISMA.

2) Chalatenango has been ignored by the central government for years. Therefore PRISMA made efforts to engage central government agencies in sustainable development initiatives. They held bilateral meetings with government agencies.

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6 This summary of strategies is based on Box 5.2 in Kandel et al., 108-110.
C) Macro-level Activities

1) PRISMA, the University of Jose Simeón Cañas (UCA) and the National Corporation of Municipalities (COMURES) organized a Forum of Debate on Territorial Planning. The goal was to start and develop a dialogue between civil organizations and state agencies.

2) PRISMA organized the Roundtable for Environmental Services. This roundtable consists of delegates from government organizations, NGOs and community-based organizations. The Roundtable published briefings on the revalorization of rural areas and compensation for environmental services, and lobbied ECOSERVICIOS, a government initiative for such services, to establish a national system of compensation. The World Bank and the Global Environment Facility (GEF) both support ECOSERVICIOS.

3) Various publications to introduce and influence alternative discourses were issued. One good example is The Environmental Chapter of the UNDP’s Annual Human Report for El Salvador (2003).

Principles of Sustainable Development in La Montañona

The micro-region of La Montañona has been a social setting for many exciting attempts at creating environmental, economic and community sustainability. The resettlement process of the returnees in a war-torn area and their communal efforts (with the support of NGOs) to start a life from scratch has been a unique experience in itself. These efforts and the strategies implemented by the ECPE project involve the following principles of sustainability (Kandel et al., pp. 111-115):

1) Emphasizing Human Development: As explained above one important focus of the resettling communities and the ECPE project was human development and strengthening social capital. The communities have been surviving by pooling their communal resources in the face very adverse conditions and their struggles had already created a high level of social capital. The ECPE project built on that base. Many micro-level activities (training to develop skills such as long-term planning, reflective evaluation of needs and strategies, consensus building to name a few) were designed with the goal of human development in mind. The youth and community members were part of various phases of research, information building, evaluation and planning.

2) Local Control of Resources: The history of land struggle in this micro-region (and in El Salvador in general) has created a lot of awareness on the control of resources. The details of land redistribution under the PTT have been described above. Communities have varying degrees of control over the agricultural land and the forests. The Vainillas Cooperative is trying a communal ownership structure for part of the land. The recent attempts of the ECPE project to increase awareness at the local level on the compensation of environmental services have been successful. Preliminary efforts for action at the regional level, and a debate
for systematizing the compensation of environmental services at the national level have been initiated.

3) Changing economic and social structures to increase opportunity and reduce dependency: The ECPE project research and fieldwork findings indicated that because of environmental degradation from previous decades and reliance on small plots, supporting subsistence farming only would not enhance the living standards in this micro-region. Therefore strategies at the micro and meso levels were directed at exploring alternative livelihood opportunities: workshops were held to brainstorm on the topic; community members were educated on environmental services; an analysis of the vegetation cover and the flora (first-steps at agricultural diversification) was conducted; the possibility of commercial uses of the forests was explored.

4) Maintaining socio-ecological system integrity: Toxic pesticide use has been completely eliminated or minimized in some communities. Thus, an important principle of socio-ecological sustainability, that is, protecting natural systems that support human and ecological well-being, has been implemented.

5) Conserving resources: Members of these communities have adopted soil protection practices to help minimize erosion. They are also practicing water and forest conservation.

6) Community sustainability: Community and family structures in this region have been severely damaged by the war, the displacement of people and lack of means of subsistence. However, successful efforts gradually helped recover the social fabric of these communities. As a result, internal and external migration has diminished in some communities and families have been able to keep their young in the locality.

Factors Responsible for Success

1) Great emphasis was placed on local capacity development through workshops and training. Local skills were developed to gather information, create knowledge and transfer this knowledge in a multi-directional manner. The locals learnt how to better communicate their development needs to the agencies and how to make use of the technical and ecological assistance that agencies delivered to them.

2) Efforts were made to strengthen existing planning skills and to integrate as many community members as possible into decision-making. Thus La Montañona’s people were empowered to develop a territorial planning process. This planning process has the goal of improving livelihoods by expanding local control over the micro-region’s natural resources.

3) The importance of consensus and cooperation was underlined in all levels of activity. Cooperation between various entities in the micro-region was established to help build future collective actions. For example, mayors have agreed to form a Mancommunal Water Board that has civil and local government delegates to work on the water management pilot project.

4) Coordination between local and central government initiatives was one major focus. Initial relations between entities in the micro-region and government
organizations were formed. This will lead to the establishment of institutional rules and arrangements at the meso-level in the future.

5) The impact of macroeconomic policies was emphasized throughout the process. Urban-oriented policies of the central government were challenged and public attention was drawn to the needs of rural people. Debates, forums and lobbying created a medium for alternative discourses on sustainable development (Kandel et al., 111-112; Agroecology)

**Difficulties and Obstacles**

1) Control over resources involves negotiation of opposing interests and determining the rights of all parties involved. For example, in the La Montañona community conflicting interests exist between the forest owners (members of CORBELAM) and the community of La Montañona. This is a major obstacle for all the residents. Harmonizing conflicting interests through negotiations and establishing frameworks concerning rights and responsibilities (in terms of the forest) is essential.

2) As described above, strategic knowledge building has been a major focus of the ECPE project. However, additional knowledge is needed to understand how the members of this community evaluate economic gains and losses, and what the migration and remittance patterns are. The more difficult subsequent step is the socialization of this knowledge: that is, how to get the local stakeholders reflect on their productive logic and how to channel them into strategic alternative paths.

3) One major obstacle is the attitude of governmental organizations towards the rural areas. In a macroeconomic policy framework that promotes urban-based activities, the *maquila* industry and the financial sector, the rural population is seen as nothing but a source of cheap labor. Elaboration and diffusion of alternative discourse to revalorize rural areas is imminent under these conditions (Kandel et al., 113-114).

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