

Factors to Improve Project Performance:  
Lessons from a Chilean Urban Agriculture Program

by

Maggie Scott

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Univeristy of North Carolina at Chapel Hill, 1998

Submitted to the Department of Urban Studies and Planning  
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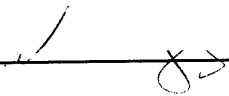
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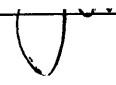
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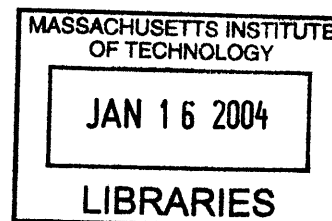
  
Department of Urban Studies and Planning  
August, 2003

Certified by

  
Professor Judith Tendler  
Department of Urban Studies and Planning  
Thesis Supervisor

Accepted by

  
Professor Dennis Frenchman  
Chair, MCP Committee  
Department of Urban Studies and Planning



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ABSTRACT

This thesis investigates a Chilean urban agriculture project that has been underway for more than twenty years in Tomé, a small coastal town located near the regional capital of Concepción. Initiated in the early 1980s by the Chilean non-governmental organization, CET SUR, the program works on themes of food security and poverty alleviation, environmental issues and women's leadership development. In 1999, this project began to replicate the Tomé experience to seven additional towns in and around the Greater Concepción area with a new initiative entitled the Toward Sustainable Cities Project.

Similar urban agriculture programs began at the same time in Santiago, but only remnants of those projects remain: a program for seniors here, a demonstration garden at the environment center there. The project in Tomé, instead of shrinking as economic conditions improved from the crisis of the early 1980s, has recently spread to seven additional towns. This puzzle forms the crux of my research: what are some of the factors that may explain why this project has achieved this longevity and managed to grow its program, while similar programs in Chile have long since vanished?

The investigation identifies two sets of factors that distinguish the Toward Sustainable Cities Project from other urban agriculture programs. The first is the high level of dedication to the job of its frontline workers. CET SUR motivates these workers in several ways: offering them opportunities to develop their personal skills, as well as granting them substantial discretion in decisionmaking. The second factor that contributes to the project's relative success is the myriad networks CET SUR has developed with government. CET SUR has developed these networks by linking program objectives with political realities such as the need of local elected officials to deliver concrete and/or visible benefits to constituents and maintain a high public profile.

# ***ACKNOWLEDGEMENTS***

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## ***THANK YOU . . .***

. . .to people involved in the Toward Sustainable Cities Project: the CET SUR staff (especially Marco for taking me around to so many meetings), the monitoras, the beneficiaries, and government officials. Thank you for sharing your stories with me.

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## ACRONYMS

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1. **CASEN survey**—the National Socioeconomic Characterization Survey (*Encuesta de Caracterización Socioeconómica Nacional*).
2. **CET**—Center for Education and Technology (*Centro de Educación y Tecnología*).
3. **CET SUR**—Center for Education and Technology for the Development of the South (*Centro de Educación y Tecnología para el Desarrollo del Sur*).
4. **CONAMA**—National Commission for the Environment (*Comisión Nacional de Medio Ambiente*).
5. **FIT**—Technical Innovation Fund (*Fondo de Innovación Técnica*).
6. **INDAP**—National Institute of Fishing and Farming (*Instituto Nacional de Agropecuario*).
7. **INE**—National Institute of Statistics (*Instituto Nacional de Estadísticas*).
8. **FOSIS**—Fund for Solidarity and Social Investment (*El Fondo de Solidaridad e Inversión Social*).
9. **MIDEPLAN**—Ministry of Planning and Cooperation (*Ministerio de Plannificación*).
10. **NGO**—Non-governmental organization.
11. **SERCOTEC**— The Service for Technical Cooperation (*El Servicio de Cooperación Técnica*).
12. **UCHO**—Municipal Union of Organic Gardens (*Unión Comunal de Huertos Orgánicos*).

## ***INTRODUCTION***

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This research grew out of an interesting incongruity: urban agriculture. At first, those two words may appear to be a contradiction in terms. In fact, most of our notions about what it means to be urban is a negation of what it means to be rural—high-rise apartment buildings versus secluded homes, dense land uses versus dispersed ones, the hustle and bustle of the city versus the tranquil solitude of nature. Agriculture is an activity that we tend to associate with rural areas. In fact, to some, an urban area is precisely defined as a place where agriculture *does not* exist.

Furthermore, there seem to be many reasons why agriculture *should not* exist in the city: for instance, the opportunity costs of land or the risk of polluting crops with contaminated air, water and soil. From an economic perspective, decreasing returns to scale of small, fragmented food production suggest that urban areas may never be anything more than an insignificant and occasional location for food production.

Yet researchers have documented cases of urban agriculture that exceed the scale of mere hobby gardening. Havana is the most widely known example: urban farms there produced 8,500 tons of produce in 1996.<sup>1</sup> Also significant is the lesser-known experience of Dar es Salaam. There, urban agriculture is the largest employer in the city, and 90 percent of the leafy vegetables consumed by urban residents are actually grown in urbanized areas.<sup>2</sup> In Shanghai, researchers have estimated that 60 percent of vegetables, more than half of pork

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<sup>1</sup> Altieri, Miguel, et al (December 1998). "The greening of the 'barrios': Urban agriculture for food security in Cuba". Agriculture and Human Values.

<sup>2</sup> "Urban Agriculture's Contribution to Sustainable Urbanisation." (2000). The Resource Center on Urban Agriculture and Forestry (RUAF).

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and poultry and more than 90 percent of milk and eggs originate from urban and peri-urban areas.<sup>3</sup>

In Chile, the most widely known example of urban agriculture is in Tomé, a coastal port town of over 50,000 people located near the regional capital of Concepción and 340 miles south of Santiago (Figure 1-1). Tomé is home to Chile's longest running experiment with urban agriculture. In this small town, the nongovernmental organization (NGO) CET SUR<sup>4</sup> has trained 5,000 people (16% of the adult population)<sup>5</sup> in the methods of agroecology<sup>6</sup> over the past twenty years. This training was a response to the pressing food security needs of Tomé residents hit hard by the economic crisis of the early 1980s.

Similar urban agriculture programs began at the same time in Santiago, but only remnants of those projects remain: a program for seniors here, a demonstration garden at the environment center there. The project in Tomé, instead of shrinking as economic conditions improved, has grown larger. The urban agriculture program has recently spread to seven additional towns in and around the Greater Concepción area with a new initiative entitled the Toward Sustainable Cities Project.



Figure 1-1: Location of the Greater Concepción Area

<sup>3</sup> Yi-Zhang and Zhang (2000). Shanghai: Trends towards Specialised and Capital-Intensive Urban Agriculture. . In: Bakker Nico, Marielle Dubbeling, Sabine Guendel, Ulrich Sabel-Koschella and Henk de Zeeuw. *Growing Cities, Growing Food: Urban Agriculture on the Policy Agenda: A Reader on Urban Agriculture*. pp. 43-66.

<sup>4</sup> CET SUR stands for Center for Education and Technology for the Development of the South (Centro de Educación y Tecnología para el Desarrollo del Sur).

<sup>5</sup> MIDEPLAN. Based on the 1992 population over 20 years of age. Available at [www.infopais.mideplan.cl](http://www.infopais.mideplan.cl)

<sup>6</sup> Agroecology is a science led by Prof. Miguel Altieri at UC Berkeley among others that demonstrates the ecologic systems involved in agricultural food production. Implicit in agroecological research is the idea that, by understanding ecological relationships and processes, agroecosystems can be manipulated to improve production and to produce more sustainably, with fewer negative environmental or social impacts and fewer external inputs (Altieri 1995).

This puzzle over the relative success of the program in Tomé forms the crux of my research: what are some of the factors that may explain why this project has achieved this longevity and recent expansion while similar programs in Chile have long since vanished?

### **1.1 WHY RESEARCH URBAN AGRICULTURE?**

Urban agriculture is a phenomenon with global reach. A 1996 study by the United Nations Development Program (UNDP)<sup>7</sup> found that 15 percent of produce consumed in cities around the globe is actually grown in urbanized areas. The study also estimates that 800 million people worldwide practice urban agriculture, of whom one quarter (200 million) generate household income from the sale of their produce. Manifestations of urban agriculture include everything from small household gardens to medium scale production along power lines or at airports.

My introduction to urban agriculture was through the lens of the United States experience. The history of urban agriculture in the US extends from the nineteenth century allotment gardens, which achieved their largest scale in Buffalo and Detroit (feeding 1,000-2,000 households during the country's first economic depression), to the famous Victory Gardens of World War I to the existing Community Gardens that dot cities from San Francisco to Chicago to Boston.<sup>8</sup> As I became more involved and knowledgeable about Community Gardening—particularly through an internship at the Boston Natural Areas Network that afforded me the opportunity to work directly with Boston's Community Gardeners—I learned how the history of these Community Gardens is often a response to the US experience of urban abandonment of the 1960s and 70s and a community development and mobilization strategy to take back trash-filled lots and crime-ridden streets became apparent.

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<sup>7</sup> Smit, J. (1996). Urban Agriculture: Food, Jobs and Sustainable Cities. United Nations Development Programme. Publication Series for Habitat II. Volume One.

<sup>8</sup> Warner, Sam Bass. (1987). To Dwell is to Garden. Northeastern University Press.

## INTRODUCTION

However, the literature on urban agriculture<sup>9</sup> presents a different story of urban agriculture in the developing world. In contrast to the community development orientation of the Community Gardens in the United States, urban agriculture in the developing world is characterized more as a survival strategy for the poor. The seminal work on this topic is the aforementioned 1996 UNDP study, which catalogues the experiences of urban agriculture from Santiago to Calcutta, from Tanzania to Beirut. The case-based research on this topic also illustrates the way urban agriculture is frequently a response to crisis, such as rapid urbanization or macroeconomic adjustment. The dissertation work of Bishwapriya Sanyal<sup>10</sup> details the actors involved in urban agriculture as well as their motivations for gardening in Lusaka, Zambia in the early 1980s and is the earliest study documenting urban agriculture as a response to economic crisis. In this research, Sanyal found that 60 percent of low-income households were growing food in the city as a response to the declining real earnings of these families.

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<sup>9</sup> See, for instance:

The Research Center on Urban Agriculture's (RUAF) website: [www.ruaf.org](http://www.ruaf.org). They publish a quarterly magazine on urban agriculture.

City Farmer website of the Canadian International Development Research Centre (IDRP) website: [www.cityfarmer.org](http://www.cityfarmer.org)

Urban and Peri-urban Agriculture website of the Food and Agriculture Organization of the UN: <http://www.fao.org/unfao/bodies/COAG/COAG15/X0076e.htm>

Agroecología y Desarrollo. Volume Number 11/12. November 1997. The Latin American Consortium publishes this journal for Agroecology and Development (CLADES). This whole issue is on the topic of urban agriculture.

Baumgartner, Bettina and Hasan Belevi (September 2001). "A Systematic Overview of Urban Agriculture in Developing Countries." EAWAG, the Swiss Federal Institute for Environmental Science and Technology and SANDEC, the Department of Water and Sanitation in Developing Countries.

Bakker Nico, Marielle Dubbeling, Sabine Guendel, Ulrich Sabel-Koschella and Henk de Zeeuw (1999). Growing Cities, Growing Food: Urban Agriculture on the Policy Agenda: A Reader on Urban Agriculture.

Petra Jacobi, Axel W. Drescher and Jörg Amend (May 2000). "Urban Agriculture—Justification and Planning Guidelines," Urban Vegetable Promotion Project Ministry of Agriculture and Co-operatives (MAC), Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)

Smit, J. (1996). Urban Agriculture: Food, Jobs and Sustainable Cities. United Nations Development Programme. Publication Series for Habitat II. Volume One.

<sup>10</sup> Sanyal, Bishwapriya (1984). Urban Agriculture: a strategy of survival in Zambia. University of California Los Angeles.

Research also attests to urban agriculture's potential to promote local sustainable development in less developed countries,<sup>11</sup> as farming in the city, if properly managed, can incorporate the three E's of sustainability: environmental sustainability, economic sustainability and equitable (or social) sustainability. Figure 1-2 illustrates the way this literature promotes urban agriculture as a way to achieve these three objectives simultaneously.

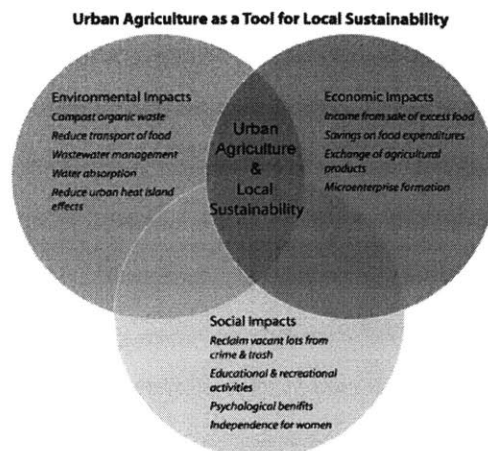


Figure 1-2

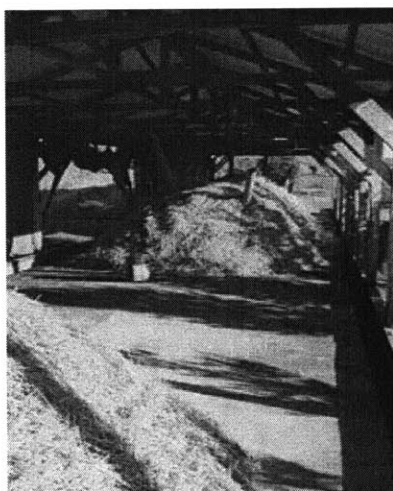


Figure 1-3: Inside the Compost Plant in Tomé

Urban agriculture can have an important impact on the environment through sustainable management of open space, recycling of organic materials to make compost (Figure 1.3) while enriching degraded urban soils, and providing a means to manage wastewater through appropriate technologies and its subsequent use in irrigation.<sup>12,13</sup> An example of the latter is in arid Cochabamba, Bolivia, where the IDRC (International Development Research Center of Canada) and a local NGO, CREAMOS, have developed a pilot

<sup>11</sup> See, in particular:

Deelstra, Tjeerd and Herbert Girardet (1999) "Urban Agriculture and Sustainable Cities" Thematic Paper 2 in Growing Cities, Growing Food: Urban Agriculture on the Policy Agenda: A Reader on Urban Agriculture. pp. 43-66.

"Urban Agriculture's Contribution to Sustainable Urbanization" (2000). RUAF publication.

<sup>12</sup> Strauss, Martin (August 2000). "Human Waste (Excreta and Wastewater) Reuse. EAWAG/SANDEC, Water & Sanitation in Developing Countries.

<sup>13</sup> Ricaldi, Víctor (1997). "Reuso de Aguas Servidas en Agricultura, Cochabamba, Bolivia" in Agricultura Urbana en America Latina y el Caribe. IDRC.

project to reuse urban wastewater for crops.<sup>14</sup> Another example is Santiago, Chile in which the vast majority of urban wastewater is used for irrigation.<sup>15</sup>

The economic impact of urban agriculture varies. Because the extreme poor spend as much as 60 to 80 percent of their income on food,<sup>16,17</sup> they practice urban agriculture at the subsistence level in an effort to enhance food security while increasing disposable income through savings on food expenditures. For



Figure 1-4: Conserves Produced for Sale by Urban Growers in Tomé

others, urban agriculture is a gateway into local markets through the sale of excess produce (including medicinal and ornamental plants or native tree species) or the initiation of small enterprises. These enterprises range from the production of necessary inputs for urban agriculture—such as seeds, compost, organic pesticides, and water delivery—to food

processing enterprises that vary from jam or salsa production (Figure 1-4) to the sale of homegrown and hand-rolled cigars to opening a restaurant or catering service.<sup>18</sup>

Urban agriculture can also have significant social impacts by reducing local crime and trash through the recuperation of urban spaces, by enabling leadership development, particularly for women, and by providing important psychological benefits. For seniors, the need for the latter may be particularly acute. Several growers in Santiago who were part of a senior's gardening program, attested to

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<sup>14</sup> Ibid. (Ricaldi).

<sup>15</sup> Ibid. (Strauss). The author actually claims that this number is 100 percent.

<sup>16</sup> Tabatabai, H. (1993) "Poverty and food consumption in urban Zaire." Cornell Food and Nutrition Policy Program Working Paper 46. Ithaca: Cornell Food and Nutrition Policy Program.

<sup>17</sup> Maxwell, D., Larbi, Lamptey, Zakariah and Armar-Klemesu (1998). "Farming in the shadow of the city: changes in land rights and livelihoods in peri-urban Accra. In Urban agriculture in the Greater Accra Metropolitan Area. Report to IDRC.

<sup>18</sup> Homer, Robert J. (December 2001). "Appropriate Methods for Micro-enterprise Development in Urban Agriculture." Urban Agriculture Magazine. RUAF publication.

the need just to get out of the house everyday and do something productive and social. One woman said that when she's in her house all her problems mount up, but when she goes out to the garden, she feels much more *tranquilo*.<sup>19</sup>

In these ways, urban agriculture often explicitly attempts to address issues of public health—by seeking to heighten food security for urban residents, encourage physical activity and increase associationalism. In Chile, for example, a national public health initiative, *Vida Chile*, has funded several urban agriculture programs as a way to promote these multiple preventive health objectives in one fell swoop.

A word of caution, however, must accompany these claims of the virtuous nature of urban agriculture to promote public health. Urban land is frequently contaminated with heavy metals, most notably lead, and other toxins. Urban air and water may also be contaminated. To the extent that urban crops take up these pollutants, food grown in the city may expose consumers to significant health risks.

The use of organic wastes as crop fertilizer can also compromise food safety. When processed properly, organic fertilizers derived from wastewater and sewage can be an invaluable input to increase soil quality and can provide a source for irrigation in arid regions such as in Cochabamba or Santiago. However, when not treated or treated inadequately, this organic waste can be a transmission vector for disease. Chile has learned this lesson first-hand through a cholera outbreak in 1991, traced to the application of untreated organic wastes onto crops that left 144 dead in Chile and Peru. Public officials seeking to halt the epidemic shut down many small-scale urban food production sites and brought the epidemic quickly to a halt. Wastewater treatment is now highly regulated in Chile as well as standards for crop irrigation.<sup>20</sup>

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<sup>19</sup> Personal communication with senior's group in El Bosque. January 2003.

<sup>20</sup> Salinas H. (1992) "Planificación Estratégica en el Control de la Epidemia de Cólera." Escuela de Salud Pública, Facultad de Medicina, Universidad de Chile. Available at:

## **1.2 CET SUR AND THE TOWARD SUSTAINABLE CITIES PROJECT**

What is evident from the many cases of urban agriculture in the literature is the malleability of this and that local actors—governments, NGOs and residents—develop their own version of urban agriculture that is specifically tailored to their needs. CET SUR’s twenty-year experiment with urban agriculture incorporates many of the characteristics listed in the section above but the variety of urban agriculture that they promote in Tomé is unique. This section describes CET SUR’s work in detail.

### CET SUR Organizational Details

CET SUR stands for Center for Education and Technology for the Development of the South (Centro de Educación y Tecnología para el Desarrollo el Sur). The project was actually initiated when CET SUR was simply CET, which was founded in 1980 in Santiago. CET SUR broke off from CET in 2001 due to ideological differences, which mainly center around a conflict over whether to focus solely on technical assistance or whether to include community organizing as a fundamental element of their work. “[CET is] focused exclusively on the technical aspects of organic farming. CET SUR broadens this approach out into a social and political approach,” as CET SUR director, Rita Moya explained.<sup>21</sup>

CET continues to offer technical assistance on agroecology in Santiago and in Yumbel, a town located near Tomé in the 8th Region of the country. CET SUR, on the other hand, has adopted an approach that closely integrates community organizing with technical assistance and works in the 8<sup>th</sup> and 9<sup>th</sup> Regions of Chile. For the sake of clarity, I will consistently refer to the NGO as CET SUR even when referring to events that occurred prior to 2001.

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[www.cepis.ops-oms.org/bvsaar/E/proyecto/generales/casos/santiago.html](http://www.cepis.ops-oms.org/bvsaar/E/proyecto/generales/casos/santiago.html)

<sup>21</sup> Personal communication. July 4, 2003.

### *Goals*

Broadly speaking CET SUR's work tackles issues of food security and poverty alleviation as well as themes of environmental quality and women's leadership development. A major goal of the program centers on the question of food security for the poor. The program aims to "make family agriculture viable, transforming it in a productive base of local and sustainable food security, for the beneficiaries of the program as well as other consumers in the participating towns." The program also focuses on "improving the food supply, both quantitatively and qualitatively as well as strengthening the local economy."<sup>22</sup> A new goal revolves around strengthening civil society and participation "to think and dream together with civil society, about how to live without exclusion or discrimination with social justice, reconnecting with ourselves and with real participation of the citizenry through strengthening leadership and associationalism."<sup>23</sup>

### *Staff*

CET SUR maintains two offices, the central office in Penco, a 15-minute bus ride from Tomé and an additional office in Temuco, the capital of the 9<sup>th</sup> Region of Chile. Six fulltime staff operate out of this office in Penco and an additional four operate out of the office in Temuco.

### *Funding Sources & Networks with Government*

The largest contributions to CET SUR's budget come from international sources including *Pan para El Mundo*, a German foundation, which gave \$756,600 over five years to the Toward Sustainable Cities Project. The America's Fund also

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<sup>22</sup> From CET SUR's website: [www.cetsur.cl](http://www.cetsur.cl).

<sup>23</sup> CET SUR internal report (December 2002). "Informe Narrativo: Transición Hacia un Modelo de Ciudad Sustentable: Desarrollo Local, Articulación Institucional y Sustentabilidad en Región de Bío Bío." This report is a self-evaluation of their work from July 2002 to December 2002.

## INTRODUCTION

contributed \$72,100 to the program over three years. The Belgium government has contributed to the compost plant in Tomé. Other Chilean sources of funding are the National Fund for Regional Development<sup>24</sup> and the NGO *Trabajo para un Hermano*, both of which have contributed to the compost plant in Tomé.

CET SUR's ability to form networks with government provides another significant source of funding. CET SUR has connections with health, environmental, and educational departments at the local and regional level. It also has worked with local community development and even sanitation departments. Furthermore, CET SUR has worked with the Chilean social fund FOSIS and SERCOTEC, (The Service for Technical Cooperation).<sup>25</sup> The Toward Sustainable Cities Project has also found an ally in the national health initiative *Vida Chile*. CET SUR's ability to raise funds is closely related to their networking capability. For instance, as a partnership of several years with *Vida Chile* comes to an end, CET SUR's contacts in government are enabling the NGO to seek out other sources of funding.

### The Program

CET SUR's work responds to the physical reality of the dense urban form in Tomé. Food production is small in scale and designed for the patios of private homes. The NGO teaches growers how to produce vegetables and raise livestock, all in the limited space of a normal home's patio (around 65 ft<sup>2</sup>, on average). CET SUR offers three levels of courses to teach participants about intensive agricultural techniques, such as developing raised beds for plants, composting organic kitchen and yard scraps, raising chickens and rabbits as well as constructing greenhouses and mud ovens. All of these lessons are based on the basic principles of agroecology. For instance, growers do not use synthetic fertilizers or pesticides, but rather produce their own fertilizer by the

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<sup>24</sup> Fondo Nacional de Desarrollo Regional. It's the principal way by which the central government transfers financial resources for regional project that are related to social or economic infrastructure.

<sup>25</sup> El Servicio de Cooperación Técnica

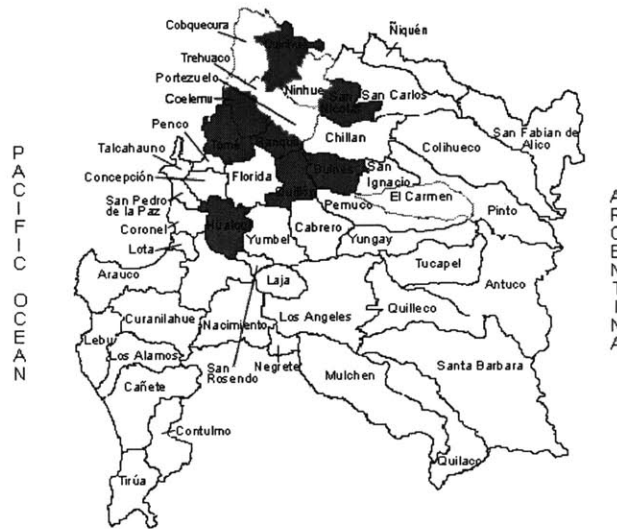
## CHAPTER ONE

biodegradation of organic waste into nutrient-rich compost and use integrated pest management strategies, which harness the natural properties of plants, to discourage infestations. Production and sale of food is focused on local networks as a strategy to promote local food security. CET SUR also seeks to preserve and develop local knowledge about indigenous crop varieties, propagating native and heirloom food species and preserving and exchanging seeds. In this aspect of CET SUR's work, in particular, the NGO seeks to advocate for and protect the traditions of the Mapuche people, the largest indigenous group in Chile.

The project began with the mission to promote urban agriculture as a response severe urban poverty. However, in its twenty-year history, the project has evolved beyond a strict focus on urban agriculture, involving thousands of residents in programs that range from gardener training to municipal composting plants and from micro-enterprise formation to eco-clubs for youth. CET SUR's twenty-year history of working in Tomé on urban agriculture has formed a wealth of knowledge and experience that beneficiaries, staff, funders and government officials thought valuable enough to replicate in other towns. This expansion was launched with the Toward Sustainable Cities Project, initiated by CET SUR in 1999, to replicate the project to seven nearby municipalities that surround and/or comprise the Greater Metropolitan Area of Concepción. These towns are Hualqui, Coelemu, Quirihue, Ranquil, Bulnes, Quillón and San Nicolás (Figure 1-5).

## INTRODUCTION

**Figure 1-5: Participating Towns in the Toward Sustainable Cities Project**



**Table 1-1: Population Statistics on the Participating Towns**

Town	1992 Population	2002 Population	Percent Growth	2002 Urban Population (as a % of population)
<b>Tome</b>	49,284	52,440	6.4%	87.6%
<b>Hualqui</b>	16,156	18,768	16.2%	78.6%
<b>Quirihue</b>	10,971	11,429	4.2%	69.6%
<b>Coelemu</b>	16,630	16,082	-3.3%	61.2%
<b>Bulnes</b>	19,713	20,595	4.5%	60.8%
<b>Quillón</b>	14,562	15,146	4.0%	49.8%
<b>Ranquil</b>	6,404	5,683	-11.3%	23.5%
<b>San Nicolas</b>	9,495	9,741	2.6%	35.2%

### *Agroecology Groups*

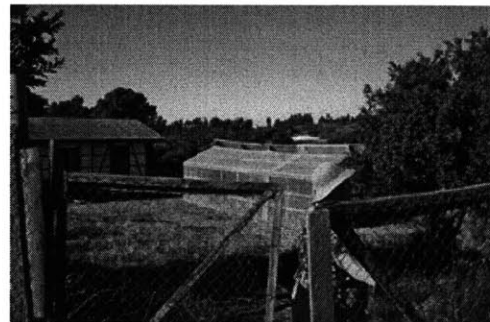
The NGO forms the program beneficiaries into groups of 10-15 people for the coursework. Typically, the groups that form in the first year remain stable throughout the course of the entire program, although the groups do tend to shrink as the years go by. One staff member estimated that the groups shrink 25

percent from the first year to the second. From the second year on, the groups are usually established.<sup>26</sup>

Each level of the coursework lasts a year and classes are held once a week typically for three hours. Level One (the first year) focuses on how to build raised beds, how to compost and the construction of mud ovens. In Level Two, beneficiaries learn how to build greenhouses as well as chicken and rabbit rearing. The third and last level is optional and teaches skills that could be used to form microenterprises such as growing worms for composting, producing animal feed or making preserves.

### *Agroecology Nuclei*

Once the groups have completed the coursework, they are free to continue to operate as a group. In each city, CET SUR staff and the *monitoras* are working to form citywide associations of the agroecology groups. These associations are referred to as agroecology nuclei. CET SUR encourages the agroecology groups to apply legal status and become integrated into one of the town-wide associations, such as the Union of Organic Growers (UCHO)<sup>27</sup> in Tomé, the largest and most established of these agroecology nuclei. The UCHO is comprised up of nineteen groups that have matriculated through the CET SUR coursework since 1993. This group meets weekly to discuss large-community projects related to urban agriculture. In 2000, the UCHO provided training to all members in growing and selling medicinal plants. That year, the UCHO also constructed its headquarters (Figure 1-6), a small building with space for meetings, a mud oven, greenhouses as well as Community Garden plots for households



**Figure 1-6: Entering the UCHO Headquarters in Tomé.**

<sup>26</sup> Personal communication with Marco Rojas, CET SUR field technician.

<sup>27</sup> Unión Comunal de Huertos Orgánicos.

## INTRODUCTION

who do not have space in their homes for a garden. The current project involves turning over ownership of the municipal compost plant to the UCHO to run as an enterprise.

The objective of nurturing agroecology nuclei like the UCHO in every participating town in the project is to ultimately develop a region-wide union that would be able to leverage greater resources for this type of project and wield political power.

### *Monitoras*

CET SUR employs frontline workers to teach the classes, recruit new members to the program, and manage the local program budgets. For the sake of expediency, I will refer to CET SUR staff from the central office in Penco simply as “CET SUR staff” and refer to the frontline workers based in each town as “*monitoras*.” The *monitoras* are a class of their own in the actors of the Toward Sustainable Cities Project. Not quite CET SUR staff, they are also not simple beneficiaries of the program. All the *monitoras* are female and that is why I refer to them in the feminine conjugation of the noun (i.e. *monitora* instead of the more typical *monitor*, which would refer to both men and women).

The 20 active *monitoras* employed by CET SUR typically live in the towns in which they teach, having themselves matriculated through a minimum of two years of the coursework. The *monitoras* receive a salary of around 5,500 pesos (\$7.84)<sup>28</sup> per class, which typically last three hours and require additional work beforehand and afterwards. Some *monitoras* teach up to four classes a week. Still, even an active *monitora* teaching four classes (or 12 hours a week not including the necessary prep work, which might bring the total up to around 20 hours per week) would only receive a monthly wage of around 80,000 pesos

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<sup>28</sup> Calculated with the July 28, 2003 exchange rate of 701.61 pesos to the dollar reported at [www.latercera.cl](http://www.latercera.cl).

(\$114), which is well below the minimum wage of 111,200 pesos.<sup>29</sup> It is misleading however, to compare the *monitoras*' salaries to the minimum wage as that would be comparing part-time to full-time work. Considering that this work encompasses fewer hours than a full-time job (by about half), being a *monitora* may present comparative advantages, especially for women who do not wish, cannot, or are not allowed by their husbands to work full-time.

However, CET SUR staff stress that they de-emphasize the pay, highlighting instead other advantages to becoming a *monitora*, such as giving back, promoting biodiversity or grounding their work in the larger picture of a struggle to save local knowledge in a globalizing world. Still, the NGO has cleverly linked the *monitoras*' personal financial incentives with the program's expansion goals. Because the *monitoras* are paid based on the number of classes they teach, they generate their own business, so to speak, by recruiting new participants and forming them into groups.

The selection of *monitoras* is an involved process. Candidates must complete two years of the minimum coursework as a regular beneficiary of the program. From there, the process of initial selection involves beneficiaries, CET SUR and the other *monitoras*. The *monitoras* must fulfill three criteria: demonstrated technical skills, demonstrated teaching abilities and a willingness to give back to the community. Efforts are made to ensure that *monitoras* do not just take on the work for money but are motivated by civic-mindedness.<sup>30</sup> Once a beneficiary has demonstrated an interest in becoming a *monitora*, and CET SUR staff, other *monitoras*, and beneficiaries have approved her, she must complete another year of unpaid training, which involves three-day weekend retreats every month. Although all expenses are paid for this training, for many women, leaving their homes for that much time every month is not an easy task. They might have children to care for, or a husband who does not approve of their wife taking off for

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<sup>29</sup> "Gobierno sube salario mínimo poco más de lo anunciado." (July 28, 2003). *La Tercera*. The minimum wage equals \$159/mo or \$1902/yr.

<sup>30</sup> Interview with Rita Moya, CET SUR Director. July 4, 2003.

## INTRODUCTION

days at time to go to courses on leadership. The retreats are typically in Concepción or Chillán, which presents other hurdles—it takes many of these women several hours to travel from their homes to these larger cities.

### *What CET SUR Provides*

The material resources that CET SUR provides vary from town to town based on the resources that the NGO is able to leverage from the municipality itself. CET SUR strives to secure municipal funding to cover the material costs of program. However, they almost always pay for the salaries of *monitoras*, unless an agreement is made for local agencies to pay for them. CET SUR also capitalizes the revolving loan funds (FIT)<sup>31</sup> that some towns have started and provides technical support. They also pay room and board at conferences and workshops, training sessions for *monitoras* and activities, and travel expenses to local, national and even international events.

### Why Research CET SUR's Toward Sustainable Cities Project?

CET SUR and the Toward Sustainable Cities Project jumped out as a project ripe for investigation for several reasons. First of all, the relatively high profile of this project in Chile suggests that CET SUR is somehow doing things differently as compared with the dismal results of similar urban agriculture projects in Santiago. I was in Chile in January of 2003, conducting preliminary field research for this thesis and several people who worked on urban agriculture in Santiago, a city six hours away by bus, knew of the work going on in Tomé, including an NGO leader and a community health worker. They cited CET SUR's work as an urban agriculture "success story." In fact, it was because of this project's relative success in Chile, that I abandoned plans to research urban agriculture in Santiago and made the decision to focus solely on CET SUR's work.

Secondly, interviews with beneficiaries and frontline staff indicate the disparate ways program has had an important impact on program beneficiaries' lives. The

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<sup>31</sup> Fondo de Innovación Tecnológico.

project's overt commitment to work with women and the historically disenfranchised Mapuche people is striking. Several people spoke of the transformative power of the project, particularly in the way that it has nurtured women's leadership, and several women spoke of how they still have to ask their husband's permission to leave the house but that this program affords them a valuable social outlet. With its focus on preserving local knowledge of food production, particularly through the seed exchanges, the project raises awareness of the Mapuche culture. Furthermore, almost every beneficiary with whom I spoke mentioned the importance of this project in improving their diet (an urgent task in Chile in which heart disease and cancer, not undernourishment or communicable disease, are the major threats to public health),<sup>32</sup> promoting social activities, getting them out of their houses, and fighting depression. Also, for many beneficiaries, their garden had become a significant source of household income, which enabled them to provide for their families when their partners could not find work or simply allowed them to have the experience of earning their own income.

### **1.3 METHODOLOGY**

After a preliminary site visit in January of 2003, I spent the month of June 2003 conducting interviews with urban growers (beneficiaries of the Toward Sustainable Cities Project), government officials, and CET SUR staff in all eight towns in which the program is operating. I spent most of my time in the field interviewing individuals associated with the program and observing meetings. In total, I conducted twenty-seven interviews with government officials in municipal, provincial and regional offices and accompanied CET SUR staff to two meetings with local government officials. I also spoke with several school directors, a social worker at a hospital and the director of another non-profit involved in the composting program in Tomé.

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<sup>32</sup>Diplomado en Promoción de Salud (2002). Instituto de Nutrición y Tecnología de los Alimentos. University of Chile.

## INTRODUCTION

Sometimes the most valuable information, however, does not come across in formal interviews. I found that more informal events, such as two seed-exchange events (referred to as *Trafkintu* in the Mapuche language), enabled me to talk casually with participants who freely shared their reflections on the project. I observed eight meetings of individual agroecology groups, or coalitions of them, such as the UCHO in Tomé. I also had the opportunity to observe the final day of a three-day leadership workshop for participants in the program and a seminar on citizen participation that was co-sponsored by CET SUR and open to the public. At these events and meetings, I had the opportunity to talk with eight *monitoras* as well as sixteen program beneficiaries.

### **1.4 CAVEAT: What This Research Does Not Undertake**

This thesis does not attempt to evaluate the effectiveness of CET SUR's urban agriculture programs. A full evaluation of effectiveness is beyond the scope of this research. The hard numbers that I have received are from CET SUR internal reports—which are undoubtedly biased in favor of the program. Occasionally, I use these numbers—but for illustrative purposes only, such as to give a sense of the number of people the program has reached or the productivity of the beneficiaries' gardens. Some of these numbers are based on surveys conducted by CET SUR itself or by outside consultants highly sympathetic to its mission. Sampling biases and unknown methods of sample selection, including small sample sizes, further complicate many of these surveys. These statistical problems could easily result in surveying the most active—and therefore most successful—beneficiaries. This type of bias would therefore skew the survey results toward a more complementary interpretation of the project's effectiveness.

For these reasons, I steer my analysis away from questions of the absolute effectiveness of the program toward an analysis of factors that have led to the relatively successful accomplishments of the project.

### **1.5 SELECTION OF FACTORS**

The factors I have chosen to explore in this research to explain the relative success of CET SUR's urban agriculture work I selected on the basis of three criteria. First of all, I wanted to address factors that are perhaps often missed by planners. In certain instances, these factors—because they are somewhat contrary to conventional wisdom or popular thinking—seemed to be overlooked even by CET SUR staff themselves. Secondly, I wanted to limit my analysis to factors that realistically could be replicated in similar projects in other places. I wanted to avoid factors that seemed to be circumstantial or unrepeatable, factors that are peculiar to the unique confluence of circumstances of the particular cases or to individual idiosyncrasies, such as charisma or exceptional leadership abilities. Lastly, I wanted to examine factors that relate to interesting research findings in the literature.

### **1.6 PREVIEW OF FINDINGS**

Based on the criteria listed above, two sets of factors seemed particularly noteworthy: the way the project has a high level of satisfaction from its frontline workers.

After a brief overview of the necessary political, economic and historic contexts in chapter two, I begin this analysis. The *monitoras* and their unusual dedication to their work is the subject of chapter three. CET SUR utilizes at least two methods to maintain this high level of dedication to the job. The first is offering the *monitoras* opportunities to develop personal skills, not only the agroecology and leadership skills specific to the Toward Sustainable Cities Project, but also transferable skills such as basic numeracy and literacy. CET SUR also endows the *monitoras* with considerable discretion over their work, such as their ability to tailor program budgets to local preferences and their autonomy in recruiting new

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members to the program. While this discretion is not limitless, granting the *monitoras* with some powers of decisionmaking enhances their job satisfaction.

Another distinction that separates the Toward Sustainable Cities Project from the rest is the myriad partnerships it has formed with government agencies. This network of relations ranges from a partnership with the sanitation department to manage a compost plant, to funding from *Vida Chile* to build mud ovens.

The ability to network with government is a crucial survival skill for Chilean NGOs as international funding has shifted away from this country following the transition to democracy from the Pinochet dictatorship. CET SUR demonstrates considerable skills in this regard. Two ways the NGO has been able to accomplish this is the subject of chapter four. This chapter explores how linking the program's concrete and visible project with the need of local elected officials to deliver benefits to constituents can enable these partnerships. High profile events related to program activities also contribute to healthy NGO-government relations.

While the literature on urban agriculture has done a lot to point out the potentialities of this activity, it has done less to examine the complex realities of how these projects operate on the ground. Without a clearer understanding of how to manage urban agriculture projects, they will not be able to live up to the ambitious claims made in the literature. It is my hope that bringing the angle of project analysis to a specific urban agriculture program can add nuance to the claims made of urban agriculture by adding meat to those theoretical bones.

## HISTORY & CONTEXT

The urban agriculture program in Tomé has evolved over the past twenty years as the political, economic, and cultural landscapes in Chile have changed. This chapter is dedicated to provide the necessary contexts—geographic, cultural, economic, and political—to fully understand the complex and changing environment in which CET SUR has been operating and to which the NGO has been adapting.

### 2.1 GEOGRAPHIC CONTEXT

Chile is divided into thirteen Regions (Figure 2-1), which include twelve numbered regions and the Santiago Metropolitan Region. The regions are numbered sequentially from the northern desert tip of the country bordering Peru to the southern territories of Tierra del Fuego, and even a slice of Antarctica that Chile claims. Tomé is located in the 8<sup>th</sup> Region,<sup>33</sup> an area slightly smaller than Switzerland. Concepción is the regional capital and its metropolitan area is the second largest in Chile with a 2002 population of 778,070.<sup>34</sup> Tomé is located 13.5 miles north of Concepción.

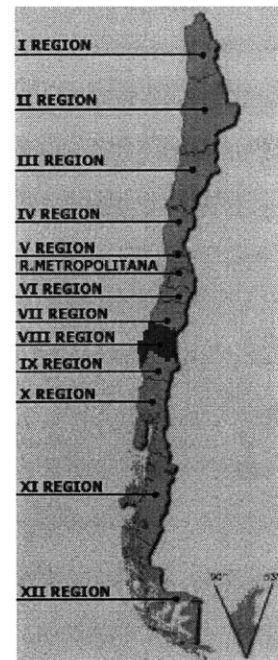


Figure 2-1: The Thirteen Regions of Chile

Each of the thirteen regions is further divided into provinces and the 8th Region contains four: Concepción, Arauco, Bío Bío, and Ñuble (Figure 2-2). Tomé is located in the Concepción province along with one other town participating in the Toward Sustainable Cities Project. All other

<sup>33</sup> The 8<sup>th</sup> Region is also known as the Bío Bío Region after Chile's largest river which runs through the Region emptying out into the Pacific ocean at the Bay of Concepción.

<sup>34</sup> CASEN, the National Socioeconomic Characterization Survey (Encuesta de Caracterización Socioeconómica Nacional). (2002). Source: Government of Chile. Available on line at: [www.gobiernodechile.cl/canal\\_regional.html?region=8](http://www.gobiernodechile.cl/canal_regional.html?region=8)

participating towns are located in the province of Ñuble. The 8<sup>th</sup> Region is further broken down into 52 *comunas*, or municipalities, each with its own local government.



**Figure 2-2: The Four Provinces and 52 Municipalities of the 8th Region**

**2.2 ECONOMIC CONTEXT**

Regional Context

Economic activity in the 8<sup>th</sup> Region of Chile is concentrated in the forestry industry, the fishing industry, and the agricultural sector. The region boasts large areas of high quality soils covering 2.9 million hectares of land, 52 percent of which is dedicated to forestry and the rest to agriculture. The interior valley of the region provides favorable conditions for wine cultivation in the Itata and Bío Bío Valleys. The agricultural sector is increasingly export-oriented and is transitioning from crops produced for internal markets—such as cereals and beans—to crops that require a greater amount of processing, such as sugar beets and oats. A recent trend in agricultural production in the region includes cultivating small, yet

highly profitable crops such as organic produce, seeds, medicinal herbs and bulbs.<sup>35</sup>

### Economy of Tomé

The economy of Tomé, on the other hand, has been historically based in industry and exporting. Tomé, founded in 1544 by a Spanish explorer, is an old port city. The town's first principle activity was the exportation of cereals, beans, wheat, wine, dried fruit, and meat jerky, produced in the dry fertile interior of the region to supply the fortune seekers of the California Gold Rush. From that time until the early twentieth century, wheat produced in Chile for export to the United States passed through the port of Tomé. At the turn of the century, the economy of Tomé became highly concentrated in the textile industry, which had three plants in the area. These factories initially supplied the uniforms for Chilean soldiers fighting the War of the Pacific against Peru and Bolivia, however, the textile industry eventually made a name for Tomé as the most important textile port in Chile,<sup>36</sup> exporting to the United States and Canada. This reputation would change dramatically in the early 1980s when most of these plants could not recover from the dual blow of lowered domestic tariffs on textiles and the Latin American debt crisis. The Bellavista Oveja Tomé plant, however, has weathered the storm and continues to operate in Tomé. A new free trade agreement with the U.S.A. promises to open new textile markets to Chile and Bellavista Oveja Tomé is seeking to capitalize on this potential growth. The owners are seeking a \$15 million dollar investment to upgrade the machinery in their plants.<sup>37</sup> Perhaps the future holds another wave of economic prosperity driven by the textile

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<sup>35</sup> Official website of the 8<sup>th</sup> Region of Chile. Available at: [www.octavaregion.com/](http://www.octavaregion.com/)

<sup>36</sup> Information found on the Municipality of Tomé's website: [www.tome.cl](http://www.tome.cl)

<sup>37</sup> Gonzalez, Maria Paz (July 21, 2003). "Bellavista Oveja Tomé apuesta por allegar a nuevos mercados." *El Mercurio*.

industry, but at least a few Tomé residents are incredulous. Many doubt they will see the benefit of any new jobs created by this expansion.<sup>38</sup>

Poverty and the Mapuche Population

Poverty in the 8<sup>th</sup> Region is high relative to nationwide averages, and in Tomé this rate is even higher (Table 2-1). In 1998, the poverty line was set at \$968/year.<sup>39</sup>

**Table 2-1: 1998 Poverty Rates<sup>40</sup>**

Region	Poverty Rate
National	23%
8 <sup>th</sup> Region	34%
Tomé	40%

The indigenous population of Chile suffers even higher levels of poverty. Eighty-six percent of Chile’s indigenous population (666,128 people) identify themselves as Mapuche. The Mapuche population is concentrated in the 9<sup>th</sup> Region of the country where 33 percent of this population lives. While the 8<sup>th</sup> Region only has about 9 percent of the country’s Mapuche population, they bear a disproportionate share of the poverty burden in the area. Fifty-two percent of the Mapuche population living in the region is poor.

**2.3 A POLITICAL ECONOMY HISTORY OF CET SUR’S WORK**

The history of CET SUR’s involvement in Tomé is inextricably intertwined with the political and economic upheaval in the second half of the twentieth century. The Chilean experiment with socialism resulted in the election of Salvador

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<sup>38</sup> Interview with Rita Moya, CET SUR director (July 4, 2003) and informal conversations with UCHO members in Tomé (June 13, 2003)

<sup>39</sup> Valdivieso, Gonzalo (1999). “El Desarrollo Local Sustentable: La Dimensión Humana.” Master’s Thesis from the Universidad Internacional de Andalucía.

<sup>40</sup> MIDEPLAN. (2002). División Social, Departamento de Información Social, Encuesta CASEN 1998 Available at: <http://www.mideplan.cl/casen3/ingresos/cuadros1998/inc98-13.xls>

Allende, the world's first freely elected socialist leader, in 1970. The dramatic policies enacted by the Allende government generated a bloody military backlash and coup only three years into his administration, propelling General Augusto Pinochet into power for the next seventeen years. The road back to democracy was a tortuous one, plagued by continued economic instability that eventually led to a mobilization of civil society against the dictatorship. Once the transition back to democracy began in late 1989, however, civil society has retreated and modern Chilean society has become de-politicized and demobilized.<sup>41,42</sup> This series of radical upheavals set the stage for both the initiation of CET SUR's work in Tomé as well as the NGO's changing program strategies.

Because the past twenty years in which CET SUR's work has taken place include turbulent economic and political transitions, it is useful to divide their work into three distinct phases: military rule and economic crisis (1982-1989), reinstatement of democracy (1989-1999) and the expansion of the project (1999-present day).

#### Phase One (1982-1989): Military Rule and Economic Crisis

The first phase of CET SUR's work began in 1982 and lasted until the 1989 transition back to democracy from the Pinochet dictatorship. During this period, the urban agriculture project was characterized by three qualities: (1) the small scale of its reach to beneficiaries, (2) its focus on simple tasks and (3) program operations that denounced the dictatorship but formed strategic alliances with government programs.

The Center for Education and Technology (CET), a Santiago-based NGO, was at this time offering technical assistance for agroecology programs, mainly in rural areas surrounding Santiago, Temuco, and Chiloé. In the early 1980s, CET began

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<sup>41</sup> Hipsher, Patricia L. (April 1996). "Democratization and the Decline of Urban Social Movements in Chile and Spain." *Comparative Politics*. Volume 28, Issue 3. pp. 273-297.

<sup>42</sup> Prosner, Paul W. (1999) "Popular representation and political dissatisfaction in Chile's new democracy." *Journal of Interamerican Studies and World Affairs*. Spring 1999. Volume 41, Issue 1.

plans to implement their program in Tomé, since the town's precipitous drop in per capita earnings due to the impact of the economic crisis had drawn national attention.

This crisis was the confluence of both macroeconomic reform—famously known as the *tratamiento de shock*, or “shock treatment,” promoted by Pinochet's team of economic advisors<sup>43</sup>—and the Latin American debt crisis. The “shock treatment” involved dramatically increased the price of goods, contracting the money supply and cutting public spending to control inflation. The regime also began to sell off those firms that had been nationalized under the Allende government.<sup>44</sup> However, a devalued peso coupled with lowered tariffs dealt a major blow to domestic industries<sup>45</sup> and local economies, struggling to cope with the economic instability, began to falter. In 1982, several of Tomé's textile factories were driven out of business due to an inability to compete with a flood of cheap imports. Shortly thereafter, 7,500 workers were left unemployed—nearly half of the urban workforce. Poverty rose to 45 percent of the population of Tomé while indigence rose to 19 percent. Average yearly income hovered around \$252. Food security became a pressing issue.<sup>46</sup>

This first phase of the program was focused on local self-sufficiency and largely operated off the radar of official government policies. In these early days, the program focused narrowly on one task—providing technical assistance to the urban poor so that they could utilize unused spaces in their homes to grow food for household consumption or sale. This very simple-sounding principle may have contributed to the longevity of the program in Tomé. Research on well-performing projects has shown that projects that start out with a narrow focus

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<sup>43</sup> These advisors became known as the “Chicago Boys” for their close connections with the University of Chicago's economics department led by Milton Friedman.

<sup>44</sup> Collins, Joseph and John Leer (1995). Chile's Free Market Miracle: a Second Look. The Institute for Food and Development Policy.

<sup>45</sup> Ibid.

<sup>46</sup> Tagle, Jorge (2001). *Del Cultivo en el huerto al Cultivo de La Comunidad.* FOSIS publication.

have better performance over time as compared with projects that attempt to perform too many tasks initially.<sup>47</sup>

However, the program also had a very modest scale during this period. Despite the program's desire to work independently from (and opposed to) the Pinochet regime, the program did explore strategic linkages with government programs even in these early days. The initial ability of the program to expand from very humble beginnings of ten people in 1982 to 100 people in 1986<sup>48</sup> was in large part due to the program's ability to leverage the Minimum Employment Program (PEM—*Programa de Empleo Mínimo*) funds of the Pinochet administration. This program, which paid below minimum wage, was an effort to stave off political backlash by providing a base level of employment for workers.

### Phase Two (1990-1998): Reinstitution of Democracy

#### *Return of Local Elections*

When in early 1990 Chile transitioned back to democracy and local elections were re-established,<sup>49</sup> the residents of Tomé were able to seize this strategic opportunity to strengthen the urban agriculture project, which had already been underway for seven years. Hundreds of residents who were already loosely organized around the CET SUR program organized an open assembly to demonstrate their work and have a public dialogue with candidates about local poverty. This collaboration is cited as a turning point for residents who came to see that they could influence local politics for the first time in nearly two decades. Shortly after the new officials assumed power, they invited these groups to

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<sup>47</sup> Tendler, Judith. (1989) "What Ever Happened to Poverty Alleviation?" World Development. Vol. 17. No. 7. pp. 1033-1044.

<sup>48</sup> These numbers may be somewhat misleading unless you keep in mind the rolling nature of participation and coursework in the program. In other words, these figures are not a cumulative tally of the total number of beneficiaries but rather only represent those enrolled in classes in a given year.

<sup>49</sup> During Pinochet years, the mayors were appointed.

continue this dialogue and develop a local development program grounded in the urban agriculture projects that residents presented at the open assembly.<sup>50</sup>

The first municipal elections brought CET SUR to the second phase of its work in Tomé. At this point, CET SUR had a new faith in the long-awaited democracy, and because of the recent mobilization of regular people against Pinochet, the NGO had a sense that the new government would be characterized by greater participation.<sup>51</sup> CET SUR, therefore, welcomed and sought partnerships with the new democratic government, including partnerships with the municipal Community Development Department, the Department of Sanitation and Beautification and the mayor. In the mid-1990s, the organization also began to expand the variety of the activities it offered. CET SUR formed an alliance with the Department of Sanitation and Beautification in Tomé to initiate a city composting plant that would engage over 1,500 residents in a training program to separate their organic household waste for processing in the plant. They also began partnerships with the schools forming eco-clubs for youth that began recycling projects and projects to care for green areas of the city. CET SUR initiated partnerships with third-party institutions, such as with the Chilean NGO *Trabajo para un Hermano* and the Chilean social fund FOSIS<sup>52</sup> to strengthen efforts to spur microenterprises from the urban agriculture projects.

### *Self-Evaluation*

In 1998, CET SUR underwent a self-evaluation to quantify the impact of its work in Tomé on combating poverty. The evaluation included a survey of 580 households participating in CET SUR's food security and microenterprise program (100 percent of all participants) and detailed figures such as net household savings from the program broken down by the food item produced (Table 2-2). The study quantified the costs associated with these activities (such

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<sup>50</sup> Ibid. (Tagle)

<sup>51</sup> Conversation with Rita Moya, CET SUR director.

<sup>52</sup> Solidarity Fund for Social Investment (El Fondo de Solidaridad e Inversión Social)

## CHAPTER TWO

as for inputs like seeds for the garden, feed for the animals and yeast and fuel costs for bread baking) and subtracted these costs from the estimated earnings or savings on food to reveal the net benefit to households participating in the agroecology programs. By the fifth year in the program, CET SUR found that beneficiaries were realizing net savings (and/or earnings, if beneficiaries sold their produce) totaling nearly \$1,000. While this does not surpass the minimum wage in Chile (\$1902 per year in 2002), this does represent significant household savings.

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Table 2-2: Net Household Savings for Beneficiaries<sup>53</sup>

	<b>Production (\$US), Calculated from Sale Value of Produce</b>	<b>Direct Costs (\$US)</b>	<b>Margin (\$US)</b>	<b>Costs as a Percentage of Value</b>
<b>YEAR 1</b>				
vegetables	18.8	0.77	18.01	4%
eggs	0	0	0	N/A
chicken	32.94	22.09	10.84	67%
rabbit	0	0	0	N/A
bread	198.38	127.11	71.27	64%
<b>Total</b>	<b>250.12</b>	<b>149.97</b>	<b>100.12</b>	<b>60%</b>
<b>YEAR 2</b>				
vegetables	127.83	5.28	122.54	4%
eggs	223.8	179.7	44.1	80%
chicken	44.23	29.67	14.56	67%
rabbit	30.68	22.67	8	74%
bread	458.09	293.5	164.59	64%
<b>Total</b>	<b>884.63</b>	<b>530.82</b>	<b>353.79</b>	<b>60%</b>
<b>YEAR 3</b>				
vegetables	144.24	5.96	138.28	4%
eggs	232.48	186.66	45.81	80%
chicken	44.23	29.67	14.56	67%
rabbit	50.25	37.14	13.11	74%
bread	551.88	353.59	198.28	64%
<b>Total</b>	<b>1,023.08</b>	<b>613.02</b>	<b>410.04</b>	<b>60%</b>
<b>YEAR 5</b>				
vegetables	720.64	29.81	690.82	4%
eggs	255.61	205.24	50.37	80%
chicken	54.21	36.36	17.84	67%
rabbit	100.51	74.28	26.23	74%
bread	553.7	354.76	198.94	64%
<b>Total</b>	<b>1,684.67</b>	<b>700.45</b>	<b>984.2</b>	<b>42%</b>

<sup>53</sup> Montero, A and A. Celis, R. Moya, A. Yurgevic (1998) found in Gonzalo Valdiviso Rodriguez's (current director of CET in Santiago) master's thesis, "El Desarrollo Local Sustentable: La Dimensión Humana" (1999). Universidad Internacional de Andalucía.

Phase Three (1999-Present): The Expansion of the Project

The current phase of CET SUR's work is characterized by the expansion to other towns with the development of the Toward Sustainable Cities Project in 1999. CET SUR's current work is also marked by explicit efforts to counter the demobilization of society that began after the transition to democracy.

*Mobilization and Demobilization*

Following the transition to democracy, CET SUR began to work in a social and political climate markedly distinct from the seventeen years of military rule that preceded it. The period of military rule—coupled with the economic crisis in the early 1980s—spurred a wave of political mobilization and popular uprising against the Pinochet dictatorship. The economic crash opened up political space for opposition to emerge. In shantytowns, groups such as *ollas comunes* (community kitchens), *comprando juntos* (purchasing cooperatives), and *amasanderías* (bread baking groups) began to form to meet the dire food security needs of residents in the face of the economic hardships of the times.

Political, educational, and human rights organizations and housing collectives formed not only to address neighborhood needs but also to vent frustration against the dictatorship. Community, labor and party organizations coordinated a highly charged mobilization campaign with the goal of forcing Pinochet's resignation. The protests peaked on July 2 and 3, 1986, when for forty-eight hours, the opposition launched a general strike which shut down Santiago.<sup>54</sup>

In contrast to the collection action and political mobilization of the mid-1980s, the climate of the early 1990s was marked by power sharing between the military and the political leaders of the *Concertación*,<sup>55</sup> the center-left coalition that

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<sup>54</sup> Ibid. (Hipsher).

<sup>55</sup> *Concertación por la Democracia*, a coalition of seventeen center and center-left political parties that have been the dominant political force in Chile since the transition to democracy. Candidates from the

brokered the transition with the military regime, as well as by a distinct decline in the mobilization of civil society. Both of these events had an impact on the opportunities of the NGO and the program strategies it adopted.

The influence of the military's control on the democratic transition cannot be discounted. The control the Pinochet regime wielded over the transition led to pact-making agreements between elites instead of the new participatory style of government for which many had hoped. The role of political pact-making in transitions from authoritarian regimes to democracy, especially in Latin America, has been widely explored in the political science literature. A pact is an explicit, though not necessarily publicly stated, agreement among political elites "which seeks to define . . . rule governing the exercise of power on the basis of mutual guarantees for the 'vital interests' of those entering into it."<sup>56</sup> Pacted democratic transitions ensure stability and increase the odds that the emerging democracy will be viable. However, "in a kind of political catch-22 . . . pacted agreements and concessions that may have made democratization possible often become impediments to further democratic reform."<sup>57</sup> For example, the continued presence of such anti-democratic measures in Chile as designated senators and the binomial election system<sup>58</sup> ensure military veto power that limits the elected government's ability to enact broad-based change.

Over ten years after the euphoric end of Pinochet's rule, Chileans recognize the limitations of their democracy. This is reflected in a 1996 Latinobarometro survey that found that only twenty-seven percent of Chilean respondents were satisfied

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*Concertación* have won the three presidential elections since the transition. The current president, Ricardo Lagos, is a member of the socialist party and served as the Minister of Education under Patricio Aylwin (1990-1996), and as the Minister of Public Works under Eduardo Frei (1996-2002).

<sup>56</sup> O'Donnell and Schmitter (1986). Transitions from Authoritarian Rule: Tentative Conclusions About Uncertain Democracies. John Hopkins University Press. page 37.

<sup>57</sup> Ibid. (Prosner).

<sup>58</sup> The binomial election system stipulates that in Congressional elections, two candidates from the same coalition party cannot receive both seats from a district unless the second-place candidate receives twice as many votes as a candidate from another party. In practice, this assures that many seats in Congress go to the coalition party sympathetic to the military regime that would otherwise go to *Concertación* candidates.

with Chile's democracy and only ten percent believed that democracy had become fully established in the country.<sup>59</sup>

The demobilization and de-politicization of Chilean society forms a contextual backdrop for the ongoing work of CET SUR in Tomé and explains CET SUR's recent preoccupation with the rebuilding of civil society. In an effort to counter the demobilization of society, CET SUR has adopted an explicit goal to rebuild social networks, empower the leadership of women, and build regional networks of people who will mobilize on issues related to urban agriculture, biodiversity, local knowledge, and indigenous and women's rights. CET SUR's work reflects this new orientation through leadership development of *monitoras*, sponsorship of seminars on the topic of rebuilding civil society, and the development of a regional network of urban growers to become a political force for change.

This orientation toward the formation of networks was one of the reasons why CET SUR began to envision the expansion of the program to neighboring towns. Another motive was that CET SUR's ability to raise funds for the project for the one town of Tomé was beginning to dry up.<sup>60</sup> Expanding the program to neighboring towns was desirable, therefore, for political reasons but also to continue to be able to raise funds from CET SUR's traditional international and Chilean funders.

The expansion began when CET SUR asked the mayor of Tomé to present the program to other mayors in 1999 and inquire if they would be interested in sponsoring the program in their respective towns. The initial response was very positive; fourteen towns expressed an interest in sponsoring the program. Unable to support work in fourteen towns, CET SUR scaled back the scope down to seven new towns based on three criteria: geographic proximity, the political support they received in the towns and the *poder de la comunidad*. El Carmen, for example, was dropped because of its geographic remoteness (it takes about

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<sup>59</sup> Lagos 1997, 137-35; Linz and Stepan 1996, 217

<sup>60</sup> Interview with Rita Moya, CET SUR Director. July 4, 2003.

3 hours to get there). Other towns that CET SUR stopped serving for these reasons were Chillán Viejo, Portezuelo, Trehauco, Ninhue and Cobquecura.

Progress to Date of the Toward Sustainable Cities Project

A common evaluation measure is, of course, the number of beneficiaries reached by the program. In Tomé, the program, over its 20-year history, had trained about 5,000 Tomé residents (around 16% of the population) in small scale, intensive agroecology methods.<sup>61</sup>

In 2002, 673 beneficiaries were enrolled for Levels I and II of the Toward Sustainable Cities Program (Table 2-3), a 54 percent increase over previous years.<sup>62</sup> CET SUR documents cite this increase to the ability of local *monitoras* to recruit beneficiaries more effectively than CET SUR staff (for more discussion of this topic, see chapter three).

**Table 2-3: Participation in the Toward Sustainable Cities Project (2002)<sup>63</sup>**

Level I (year one of program)	183
Level II (year two of program)	490
<b>TOTAL ENROLLED BENEFICIARIES</b>	<b>673</b>

<sup>61</sup> Personal communication with Rita Moya. CET SUR Director. July 2003.

<sup>62</sup> Ibid. (CET SUR internal report, 2002).

<sup>63</sup> Ibid. (CET SUR internal report, 2002).

**Table 2-4: Participation by Town**

Hualqui	135
Bulnes	97
San Nicolas	92
Coelemu	92
Tome	82
Quirihue	82
Quillón	55
Ranquil	38
<b>TOTAL</b>	<b>673</b>

These 673 beneficiaries were organized into twenty-eight groups and women led twenty-five of them. In total, 88 percent of the beneficiaries of the program are women. The *monitoras* in each town conducted a survey of beneficiaries to estimate the amount of land on average that beneficiaries were gardening in their homes and the amount of food produced per garden. For beneficiaries in their first year of the program, this estimate ranged from 14.8 kilograms of food per year per beneficiary (Hualqui) to 43.5 kilograms of food per year per beneficiary (Quillón).<sup>64</sup> The average numbers are presented in Table 2-5.

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<sup>64</sup> See Appendix I. for the complete numbers listed in the report.

**Table 2-5: Average Food Production per Family (2002)<sup>65</sup>**

Production of Vegetables by Family	
Square feet of land	65.1
Production (lbs.)	54.9
Pound of food/square foot	0.8
<b>Total families surveyed</b>	<b>395</b>

This chapter has provided the necessary contextual information about CET SUR's history in Tomé, as well as the progress to date of the Toward Sustainable Cities Project, to set the backdrop for my investigation. The next two chapters begin the analysis section of this research.

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<sup>65</sup> Ibid. (CET SUR internal report, 2002).

## **MOTIVATING THE MONITORAS**

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Often a key issue in project management is how to keep distant frontline workers dedicated to their jobs. In fields ranging from community health to microcredit to forest management, central offices carry out projects through dispersed frontline workers. These workers are often the face that the organization presents to the public because they have more interaction with the general public than central office bureaucrats. These workers may also be the drivers for reform of failing programs as demonstrated by recent research by Joshi, which documents how frontline forestry workers organized through their union to push for reform of a forest management program in West Bengal, India.<sup>66</sup> However, because of the difficulty of supervising remote staff, frontline workers might also be tempted to shirk work responsibilities or even attempt to cheat the program.

To combat the potential problems associated with distant workers and to encourage a high level of worker dedication to the job, central organizations seek ways to motivate dispersed frontline workers. While raising pay is perhaps the most obvious option, many organizations also experiment with a variety of non-monetary factors to motivate workers. Witness the case of the frontline health care workers in Ceará, Brazil:<sup>67</sup> a publicity campaign launched there by the central government provided valued community recognition for frontline workers, a powerful factor in increasing worker dedication to the job and improving project performance.

So if the dedication to the job of frontline workers is a cornerstone for good project performance, what are the factors that do or *could* contribute to dedication on the part of the *monitoras*? Maintaining a high level of commitment on the part of the *monitoras* is essential, as CET SUR staff cannot constantly supervise every *monitora* in every town, making sure that she is performing all

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<sup>66</sup> Joshi, Anuradha (February 2002). Roots of Change: Front Line Workers and Forest Policy Reform in West Bengal. MIT dissertation.

<sup>67</sup> Tendler, Judith (1997). Good Government in the Tropics. John Hopkins University Press.

the tasks that are expected of her. I devote this chapter to answering that question and identify several factors beyond the pecuniary variety that cause frontline workers to have a high level of job dedication and fulfill work obligations even when supervised from afar. The frontline workers in the Toward Sustainable Cities Project—the *monitoras*—and their dedication to their work is the subject of this chapter.

I do not mean to imply that financial incentives are not important, however. Interviews with eight *monitoras* indicated that monetary factors were an important motivational factor. While the *monitoras*' salaries are below the minimum wage in Chile, they do represent a substantial amount of supplemental income—and for families teetering on the edge of poverty, this additional income can make all the difference.

I spoke with one *monitora*, Rosa Badilla, who was particularly candid about how the salary influenced her decision to become a *monitora*. She has been in the program for three years. She described how she was interested from the start in becoming a *monitora*—despite the long training process—and how she only had a minimal interest in gardening itself. She maintains only a small garden at her house and does not desire a mud oven. Teaching is her true passion and she prefers to use her skills to educate others. For her, the motivating factor in her decision to become a *monitora* in the program was the fact that it would enable her to generate a little income by teaching the classes.<sup>70</sup>

Nonetheless, becoming a *monitora* probably would not be the first option for someone who needs quick cash; it takes time and effort to become a *monitora*. Recall the long training process described in chapter one: two years of

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<sup>68</sup> Calculated with the July 28, 2003 exchange rate of 701.61 pesos to the dollar reported at [www.latercera.cl](http://www.latercera.cl).

<sup>69</sup> “Gobierno sube salario mínimo poco más de lo anunciado.” (July 28, 2003). *La Tercera*. The minimum wage equals \$159/mo or \$1902/yr.

<sup>70</sup> Interview with Rosa Badilla Sepúlveda. June 22, 2003.

participation in the program as a beneficiary and another year of unpaid training to become a *monitora*.

Furthermore, women who participate in the program as *monitoras* contribute many unpaid hours to the program. While they are paid for the classes they teach, the *monitoras* are not paid for myriad other activities in which they are expected to participate. These activities can put substantial demands on their time. One example of this intense dedication to the job that I found astounding was that two *monitoras* were willing to travel three and half hours each way to attend a two-hour meeting, which they were not paid to attend.

Therefore, what was particularly interesting was that the *monitoras* spoke with equal emphasis of non-monetary motivational factors. Two such factors that contribute to job dedication jumped out from the meetings and interviews I conducted: the potential for leadership and personal development and the discretion in decisionmaking granted by the CET SUR central office to the *monitoras*. I also explore what is an untapped source of motivation in the Toward Sustainable Cities Project: elevating the local status and/or community recognition of *monitoras* and their work.

### **3.1 PERSONAL DEVELOPMENT**

The investment in human development that the Toward Sustainable Cities Project offers the *monitoras* is an important non-monetary factor that contributes to a high level of worker dedication. These investments include activities that are directly related to the Toward Sustainable Cities Project, such as the training that beneficiaries must undergo in order to become a *monitora*. However, an extremely important motivating factor for the *monitoras* was an activity that was only indirectly related to the mission of Project itself: the formal classes that CET SUR offers to *monitoras*, which allow them to complete and receive certification for their basic education.

Recall from chapter one that there are no educational prerequisites to become a *monitora*. What is required is that they demonstrate the required technical skills as well as teaching abilities and have a willingness to give back to the community. However, CET SUR has since found that enabling these women to achieve a higher level of literacy is important in increasing their effectiveness as *monitoras*. The tasks that CET SUR requires of the *monitoras*—managing program budgets for their group, maintaining records and teaching their classes—require a functioning level of reading, writing and mathematical skills.

The Ministry of Education has recently started a new program called *Chile Califica*, which promotes adult education classes in an effort to make the regional labor force—which has a relatively high percentage of adults in the regional labor force (over 50 percent) that have not completed their high school education—more competitive nationally and internationally. However, since the Ministry of Education’s expertise does not lie in the realm of recruiting eligible participants to such programs, it has developed a program that enables third parties to offer this training to their beneficiaries. Different non-profits sign up interested adults and the Ministry selects programs to sponsor on a point-based system considering the number of participants a particular NGO has signed up, and in particular, the number of women and the number of poor enrollees. Participants in the program can receive certification for the coursework they master and the NGO receives compensation based on the number of modules that the students complete. Students are given a diagnostic test before and after the class to measure this progress.<sup>71</sup>

In 2002, CET SUR began to offer these adult education classes to the *monitoras* in order to up-skill these workers, meet a articulated desire of the women, and receive a small amount of compensation (depending on how much progress the women make) from the Ministry of Education. This program is also attractive to CET SUR because they can combine the standard curriculum they are required

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<sup>71</sup> Interview with Rodrigo Martinez. Regional Secretary of Education. June 11, 2003.

to teach by the Ministry of Education with coursework related to their programs. For instance, CET SUR uses greenhouse construction to teach basic math concepts and agroecology principles to teach science.<sup>72</sup>

This type of up-skilling of staff can be a powerful motivational factor for workers. In fact, at one of the group meetings that I attended, there was a very weak response to the events that the field technician was announcing *until* he mentioned that CET SUR would be offering these basic education courses in the town starting the following year. At that point, many people began asking questions about how to sign up or about how to bring the classes to their town.<sup>73</sup> While CET SUR now offers these courses to all program beneficiaries, these supplemental classes began as an attempt to up-skill the *monitoras*.

The high level of excitement and interest in these classes at the group meetings demonstrated that this element of the program was in high demand. Part of the reason that these skills are so desirable is that they are transferable—*monitoras* who receive their high school diploma through this program will be able to carry that asset with them even if they leave their role as a *monitora*.

### **3.2 WORKER DISCRETION**

Another practice utilized by CET SUR that motivates frontline workers is devolving decisionmaking authority to the *monitoras* over certain aspects of the program such as recruitment and budgeting. Empowering workers to make decisions about their work, rather than constantly carrying out instructions from central staff, offers workers the flexibility and autonomy they crave to make their work their own. One example of this is the case of health care workers in Ceará, Brazil who appreciated their ability to expand their job definition from solely preventive health care to some curative tasks in a way that gave them more authority over their work and made it more interesting as well.<sup>74</sup> Like these health

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<sup>72</sup> Interview with Rita Moya. July 4, 2003.

<sup>73</sup> Observations from meeting of agroecology nuclei in Quillón and San Nicolás. June 10 and 12, 2003.

<sup>74</sup> Ibid. (Tendler, 1997)

care workers, the *monitoras* in the Toward Sustainable Cities Project value being able to make meaningful judgments about the programs they implement on the ground. Elena Silva, one of the most experienced *monitoras* in the program from Tomé described that one of the best parts of being a *monitora* has been the opportunity to do many different kinds of things, to continue to learn about gardening and now even composting at the plant they've founded in the city. She also stressed how much she has enjoyed the opportunity to go to other towns to teach these courses.<sup>75</sup> The speed with which Rosa Badilla Sepúlveda, a *monitora* in San Nicolás, set up an impromptu meeting with the local health director to question her about funding the program in the upcoming year, revealed both the zeal she held for her work, but also the benefit to CET SUR in granting the authority to manage the local program budget.<sup>76</sup>

The Toward Sustainable Cities Project grants the *monitoras* this discretion in several ways and this section is dedicated to a discussion of two: budgeting and recruitment.

### CET SUR's Commitment to Worker Discretion

The Toward Sustainable Cities Project, like other CET SUR programs before it, articulates a firm commitment to building local leadership and endowing these leaders with the power to take ownership of the program. For instance, in its mission statement CET SUR states that it strives “to support the development of civil society, so that we will not be mere spectators in the decisions that come from government or from other centers of power.”<sup>77</sup> Internal reports reveal that the NGO seeks to foster “real participation of the citizenry through strengthening leadership.”<sup>78</sup>

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<sup>75</sup> Interview with Elena Silva, *monitora*. Tomé. January 2003.

<sup>76</sup> Observations of the agroecology group meeting in San Nicolás. June 12, 2003.

<sup>77</sup> From CET SUR's website, available at [www.cetsur.cl](http://www.cetsur.cl)

<sup>78</sup> CET SUR internal report (December 2002). “Informe Narrativo: Transición Hacia un Modelo de Ciudad Sustentable: Desarrollo Local, Articulación Institucional y Sustentabilidad en Región de Bío Bío.” This report is a self-evaluation of their work from July 2002 to December 2002.

What is revealed in CET SUR's operations, however, is that absolute worker discretion is not in the best interests of the program. The autonomy of frontline workers has its limits. Creative tensions between local and central agents are needed to build structures of accountability. With too much central control, frontline workers feel stifled and the program does not adapt to suit local realities and preferences. With too much local control, the door is opened to rent-seeking behavior.

Because the Toward Sustainable Cities Project is the first attempt by CET SUR to expand the program to distant towns, it is also the NGO's first effort at considering issues of enabling the discretion of distant community agents to increase worker dedication to the job, among other objectives, while maintaining some degree of programmatic control at the central level. This expansion became an experiment, therefore, in which CET SUR aimed to find the right balance between the devolution of decisionmaking to local agents and its retention at central levels. Despite the newness of this task, CET SUR did have a developed model on which to fall back. The NGO's nearly two decades of experience in Tomé organizing beneficiaries into groups and culling leaders from them—the *monitoras*—who would then train and recruit new beneficiaries provides a baseline model for the NGO with which to experiment in the new towns.

### Managing the Budget

As mentioned above with the example of Rosa in San Nicolás, budgeting is one activity for which CET SUR devolves some discretion to frontline workers. CET SUR allocates blocks of funding to the *monitoras* in each town at the beginning of the programmatic year. The groups are then given the power to allocate this money as they choose, within certain parameters. CET SUR may block out a town's budget for materials for greenhouse and oven construction, tools and

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<sup>79</sup> World Bank Report. "Empowerment Tools and Practices." Available at: [www.worldbank.org/poverty/empowerment/toolsprac/tool06.pdf](http://www.worldbank.org/poverty/empowerment/toolsprac/tool06.pdf)

seeds. In this way, the staff gives the group some discretion over how to use each block of money as long as it is actually used for the assigned purpose. For example I witnessed a discussion in Hualqui during a meeting of an agroecology group<sup>80</sup> discussing how to allocate a block of funding devote to constructing greenhouses. If a group is given \$200 for materials to build greenhouses, the group could choose to build one large greenhouse for \$200, which the whole group would then share, or they can choose to build four smaller ones for \$50 each. While the group did not resolve the issue of whether they would build many small greenhouses so that every beneficiary might have one at their house or if they would build one or two large ones to share, the important aspect of the conversation was that the group was able to have the discussion in the first place. Beneficiaries voice their opinion but it is ultimately the *monitora* who decides how to manage the funds. In this way the groups—through the *monitoras*—are able to exercise some discretionary power in the budgeting process and tailor broad program objectives (i.e. build greenhouses) with local preferences (i.e. build five small greenhouses instead of one large one).

### The Power to Recruit: Community-Based Targeting

Another way in which CET SUR has enabled the discretion of the *monitoras* is in recruiting new beneficiaries to the program. In fact, the NGO relies rather heavily on its frontline workers to bring in new households to the program as central staff have limited contacts with residents in the seven towns into which the Toward Sustainable Cities Project has expanded.

CET SUR's orientation is to serve low-income households as demonstrated by their self-evaluations and internal reports that detail the percentage of beneficiaries that fall below the poverty line,<sup>81</sup> and the program actively targets the poor to ensure that the benefits of the program go to this population. The Toward Sustainable Cities Project engages in two methods of targeting:

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<sup>80</sup> From observations of the “Grupo Huertos Familiares” agroecology group in Hualqui. July 1, 2003.

<sup>81</sup> Ibid. (2002). Informe Narativo.

geographic and non-pecuniary. The first method involves selecting towns in which poverty is high as compared to the region. Tomé, for example, had a 1998 poverty rate of nearly 40 percent<sup>82</sup> while the rate was 21 percent nationally and 32 percent in the 8<sup>th</sup> Region.<sup>83</sup> The second method is a by-product of the nature of the program itself. This program—which focuses on such activities as chicken and rabbit rearing and composting kitchen scraps—is unattractive to elites and the middle class. So while the program does not seem to overtly stigmatize beneficiaries, leakage to the non-poor is minimized because the elites and the middle class view agricultural activities—especially in the city—as distasteful.

One of the primary challenges posed by the expansion of CET SUR's work was how to reach out and engage the target population in towns in which there was no established base and how to form these new participants into the core groups of the program. Having received political buy-in from the mayor's council who invited CET SUR to bring their urban agriculture program to their town, the way the Toward Sustainable Cities Project organizes itself initially is by using established networks, such as existing government or community-based groups, to publicize the program and recruit new participants. Due to the three years of training required for *monitoras*, outside *monitoras* (usually from Tomé) commute into these towns to teach the coursework. The *monitora* continues to commute from Tomé until *monitoras* have been trained from their own town.

Once *monitoras* are trained, the mechanism by which the program recruits new members involves the active participation of community agents. In referring to the *monitoras* as community agents, I am somewhat extending the definition provided by Conning and Kane<sup>84</sup> in which they classify community agents as “social or religious groups, single-purpose NGOs, or local elected officials or

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<sup>82</sup> CASEN survey (1998). Source: Ministry of Planning and Cooperation (Ministerio de Planificación y Cooperación: MIDEPLAN). Available at: <http://infopais.mideplan.cl>

<sup>83</sup> MIDEPLAN. (2002). División Social, Departamento de Información Social, Encuesta CASEN 1998 Available at: <http://www.mideplan.cl/casen3/ingresos/cuadros1998/inc98-13.xls>

<sup>84</sup> Conning, Jonathan and Michael Kevane. (2002). “Community-Based Targeting Mechanisms for Social Safety Nets: A Critical Review.” *World Development*. Volume 30, No. 3. pp. 375-294.

governing bodies.” The authors add that “the extent to which an agent qualifies or not as a community agent depends on that agent’s level of embeddedness in local community affairs. . . the degree of involvement of the group or individual in other functions and activities that imbricate them in poor sub-communities, or their degree of involvement in the day-to-day community life of the poor through residence, private business, or social activities.” I extend this definition here to include the local leaders that the *program itself* has cultivated.

I refer to the use of the *monitoras* to recruit new beneficiaries as community-based targeting. This reference again borrows a definition from recent literature describing community-based targeting as a state policy<sup>85</sup> that contracts with community agents to one or more of the following activities:

*“(a) identify recipients for cash or in-kind benefits, (b) monitor the delivery of those benefits, and/or (c) engage in some part of the delivery process.”<sup>86</sup>*

This project does employ community agents to do all three tasks outlined above. *Monitoras* identify the beneficiaries of the program through their responsibility for bringing in new participants into the program, monitor the benefits by managing program funds, as well as engage in the delivery process by teaching the classes and managing project funds devolved to the local level from CET SUR.

### Benefits of Worker Discretion in Recruitment

The primary benefit of using *monitoras* to recruit new members to the program that CET SUR notes is that the number of beneficiaries has gone up since this has started. Recall from chapter one that new entrants into the Toward Sustainable Cities Project has increased 54 percent from 2000 to 2002.<sup>87</sup>

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<sup>85</sup> One key distinction, however, is that here the programs are not administered by a state agency but rather by an NGO.

<sup>86</sup> Ibid (Conning and Kevane).

<sup>87</sup> Ibid. (CET SUR internal report. 2002)

Interestingly, the use of community agents to recruit new members and form them into groups brings distinct benefits to the Toward Sustainable Cities Project beyond increasing worker's dedication to the job. Other benefits include reduced operating costs and the potential for better screening of beneficiaries through the local knowledge of the *monitoras* to identify and recruit the poor into the program.

A central concern for any program on a tight budget is how to keep operating costs low. One benefit of community-based targeting in general is that local staff are often cheaper to employ than more professional staff.<sup>88</sup> In the eight cases of the Toward Sustainable Cities Project, CET SUR is able to pay the *monitoras* less than fulltime staff both because the *monitoras* only work part time as well as because they demand less pay. In this case, community-based targeting appears to “increase the size of the cake” available to beneficiaries of the program by reducing program operating costs.

Another argument for community-based targeting is that the local knowledge that community agents can employ makes their work more efficient.<sup>89</sup> However, scant evidence supporting this claim surfaced in my research of the Toward Sustainable Cities Project. Although *monitoras* certainly did possess increased local knowledge as compared to the centralized staff, which would perhaps lead to better screening methods, *monitoras* recruited new beneficiaries very loosely and without any explicit criteria that I observed. They simply went door-to-door to talk to families in their homes. Perhaps the *monitoras* employed some type of selection of neighborhoods or made judgments about income level based on their face-to-face interactions with potential participants in their homes, but I did not see evidence of this or pose that question to the *monitoras* to whom I talked. The primary benefit to CET SUR of the use of *monitoras* to recruit participants—beyond enabling worker discretion over on-the-ground program operations—seems to be the reduced program costs through using the cheaper resource of local workers who work part-time for less pay and do not require benefits.

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<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

Limitations on the Discretion of *Monitoras*

Despite the considerable autonomy of the *monitoras* in recruiting new participants to the program, CET SUR does not delegate full discretionary power to these frontline workers in the formulation and maintenance of the agroecology groups, on which their salaries are based. Instead, CET SUR retains fundamental oversight on that issue by setting clear and rigorous rules around group formation to ensure that program resources are used efficiently and that the *monitoras* do not cheat the system by forming many small groups instead of combining them into larger ones to increase their salary. Because one of the greatest costs to the program is the *monitora* salary, the NGO has an interest in making sure that the number of beneficiaries in each class is as great as possible without compromising the ability of the *monitora* to teach effectively. CET SUR staff has determined that the optimal group size is between ten and fifteen people, and CET SUR staff, therefore, retain the power to rearrange groups formed by the *monitoras* if the number of beneficiaries per group dips too low.

CET SUR staff made frequent site visits to monitor these groups. I happened to be observing the project at the beginning of a new program cycle,<sup>90</sup> and CET SUR staff from the central office were traveling to several towns to ensure that the groups that were set up by *monitoras* had the number of participants that the *monitoras* indicated. In Hualqui, for instance, a CET SUR staff member was sent to check up on program groups and several groups had to be combined because participation had dropped to low levels. She demanded that each group enrolled for classes in the upcoming year provide a documented list of the participants. She was firm with them: when she came back tomorrow for the list, only those people with signatures on the form would be in the program. However many signatures they had by tomorrow would be the people that they would consider in their group. She also added that the *monitoras* needed to watch out for people who come only on the days when they hand out materials and never show up

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<sup>90</sup> Because in the southern hemisphere the seasons are the reverse of ours and because this project's yearly cycle is linked to the growing season, the project begins a new year July 1 of every year.

again. She said that if people don't show up for two classes, they should kick them out of the group. She described Hualqui as *retrasado* ("very behind") and that they need to get their act together.<sup>91</sup>

Because these groups were previously taught by different *monitoras*, one would lose out on the salary from teaching that class once the two groups were combined into one. Because the *monitoras* know that their groups can be combined or disbanded if participation is not sustained, they have a strong motivation to make sure that the beneficiaries stick with the program. In this way CET SUR builds incentives to maintain a low attrition rate in its programs as the *monitoras* work to maintain their group size above a level that will lead CET SUR to combine it with another.

The discretion granted to the frontline workers is significant in boosting worker morale and dedication to the job, however, we should not mistakenly assume that CET SUR grants workers absolute autonomy in decisionmaking in these areas nor that granting this authority does not provide other benefits to the NGO, which may be as important as improving worker morale. The restriction on devolving full autonomy to workers stems from a need to create structures of accountability between frontline workers and central staff. The related benefits include reducing program operating costs by using the *monitoras* to carry out activities less expensively than central staff and by targeting the poor more effectively. These nuances and complexities in promoting worker autonomy reveal that granting workers discretion in making decisions may be an important factor in high worker morale and dedication to the job, but it is also delicate balance of several factors that must be considered carefully.

### **3.3 THE UNTAPPED FACTOR: STATUS**

The last factor that I found to be important to the *monitoras* was not only unintentional to the program but also actively discouraged by CET SUR staff.

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<sup>91</sup> Observations from four group meetings in Hualqui. July 1, 2003. The groups were the *Grupo Vegal*, the *Grupo Huertos Familiares*, and the *Grupo Primavera*.

Based on conversations I had with the *monitoras*, however, and the evidence in the literature about these types of frontline workers, this factor is worth mentioning here as an important *untapped* factor in promoting and maintaining dedication to the job. This factor is enhancing the community recognition and appreciation the *monitoras* receive in their communities as a result of their title of *monitora*. Despite the fact that CET SUR staff discourages any attempt to elevate the status of the *monitoras*,<sup>92</sup> wanting them to be motivated by other factors such as civic mindedness or a willingness to “give back”, several *monitoras* mentioned how they appreciate the new respect they receive from group members and how being a *monitora* has made them think differently about themselves and their leadership capabilities.<sup>93</sup>

The CET SUR director also mentioned how the mere title of *monitora* is important to these frontline workers. CET SUR attempted to change the name to *promotora* in an effort order to downplay the potential for status raising, but the women insisted on continuing to be called *monitoras*.<sup>94</sup> The difference between being referred to as a “monitor” instead of a “promoter” may seem slight, but the distinction is important to these frontline workers.

This potential of using community status as a factor to maintain high levels of worker satisfaction is illustrated in the Brazilian case of Ceará in which a media campaign designed to highlight the effectiveness of the preventive health campaign was meant to increase the popularity of the mayor, but had the unintentional effect of raising worker morale.<sup>95</sup> CET SUR could choose to adopt this type of strategy that simultaneously publicized the work of the program while also cultivates a sense of personal satisfaction on the part of the *monitoras*.

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<sup>92</sup> Interview with Marco Rojas. June 12, 2003.

<sup>93</sup> Interview with Elena Silva, Tomé *monitora* (January 27, 2003) & with Rosa Badilla Sepúlveda, San Nicolás *monitora* (June 27, 2003)

<sup>94</sup> Interview with Rita Moya. June 9, 2003.

<sup>95</sup> Ibid. (Tendler, 1997)

### CHAPTER THREE

While CET SUR staff believes that using the power of community status as a factor is undesirable, because it distorts the intention of the program, which is based on large ideals like community service, self-help for the poor, that imply a certain degree of selflessness, the issue can be viewed from a different perspective and may be one of nomenclature. Framing the issue of “enhancing community recognition and appreciation” may be more palatable to the NGO than attempting to “raise the status” of these workers, when the end result, in fact, might be very similar. Regardless, instead of attempting to minimize the natural human tendency to desire respect from one’s peers, the program could foster this positive effect by highlighting the important role these *monitoras* play in their communities.

## **NETWORKS WITH GOVERNMENT**

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The Toward Sustainable Cities Project is unusual in that it challenges the conventional wisdom about the lack of cooperation between NGOs and governments. The term “NGO” stands for “*non-governmental organization*” and encapsulates the separateness that frequently divides NGOs and government. CET SUR’s work in expanding its urban agriculture programs to the seven towns that comprise the Toward Sustainable Cities Project, however, demonstrates a vast network of relationships with government from agencies ranging from health to education to sanitation. Developing support among elected officials has been key in developing these networks.

Forming partnerships with government is crucial for the Toward Sustainable Cities Project for several reasons. For one, these relationships enable the program to tap into established government networks, such as neighborhood associations, mother’s groups or youth clubs. Access to established networks is particularly important in towns in which the Project has no history or base, and enables CET SUR to recruit new beneficiaries for the program more easily.

Secondly, the financial resources that government agencies or programs can bring to the table provide essential capital to support the Toward Sustainable Cities Project. Expanding the program to seven towns is a large and on-going financial investment that CET SUR cannot make alone. For example, the monetary commitments that *Vida Chile* has made to cover some of the material costs of the program have been essential expanding the program to these seven additional towns. Many program beneficiaries cannot afford to pay these costs themselves and would not participate in the program if they were expected to do so.<sup>96</sup> As the partnership with *Vida Chile* appears to be drawing to a close in many

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<sup>96</sup> The flip side of this argument is that by not requiring *any* financial contribution from beneficiaries, the Project creates a culture of dependency. This point came up in several interviews. However, another

municipalities, CET SUR is attempting to broker new partnerships with government, for example with the *Programa Puente* of the *Chile Solidario* program. This FOSIS-sponsored program allocates money to the extreme poor and has recently started allotting funds specifically for productive, or income-generating, activities. CET SUR is attempting to broker a deal with municipalities so that *Programa Puente* beneficiaries can use the funds apportioned for productive uses to pay for their material costs in the Toward Sustainable Cities Project.

Finally, the professional and technical expertise that municipal officials offer can be invaluable. For instance, the municipal planning department in Tomé has created professional reports and mapping projects of the old municipal dump, the potential site for the new compost plant.

In its ability to cultivate these networks with local, provincial and regional government, CET SUR distinguishes itself even from its parent organization, CET. In speaking with CET's director, he commented on how Chilean NGOs received generous amounts of funding from international foundations and governments during the Pinochet regime, but that since the return of democracy, this funding has tapered off. As a consequence, NGOs have been forced to form partnerships with government to stay afloat. In every other place other than Tomé, CET's work has waned due to this drop-off in funding and a lack of participation from the local municipalities. For instance, in Lampa, a town in which CET has been working, "the local municipality kept saying *yes, yes, yes* but they never did anything. Tomé was the only comuna in which the local government actually got anything done."<sup>97</sup>

CET SUR's relative success in developing these networks with government raises the question of how it has been able to do this when other institutions have

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argument for charging a small fee for services exists: it could serve as an accountability mechanism for the NGO to demonstrate that beneficiaries value the services it provides.

<sup>97</sup> Interview with Gonzalo Valdivieso, CET director. Santiago, Chile. January 13, 2003.

failed. The benefits of these government partnerships for an NGO are clear—especially when faced with new funding realities from international sources—yet they are rather unusual for an NGO to develop. The story we typically hear is how NGOs and government agencies do not cooperate. CET SUR seems to defy this trend in its work with linkages to health, environmental, community development, sanitation, and education departments. This chapter explores how the NGO has been able to cultivate these networks with government and points to two types of program aspects which have been more successful in gaining the support of local elected officials: projects that provide concrete and visible results and high profile events.

#### **4.1 THE USUAL STORY**

Certainly, I could also point to several examples of how the program had difficulties in forming these linkages. For one, the Toward Sustainable Cities Project, like many urban agriculture projects, lacks an institutional home because its programming typically falls outside the purview of any one government agency. For example, the program tackles environmental issues, as well as urban agriculture, but receives only spotty funding from the National Commission on the Environment (CONAMA). The National Institute of Farming and Fishing (INDAP) cannot legally support the project because they are required by law to focus on projects that fulfill certain criteria, one of which is that they work with people who receive most of their income from agriculture.

#### **CET SUR and FOSIS**

Although the project also does not often fall within the purview of the Chilean social fund FOSIS, which focuses narrowly on income-generating activities, CET SUR and FOSIS have developed strategic partnerships, such as with microenterprise formation in Hualqui and with compost plant construction in El Carmen and Portezuelo (before CET SUR dropped these towns from the Project). Many facets of the CET SUR program—such as the seed exchanges or the leadership development programs—do not focus on generating an income. In

fact, even in the income-generating aspects of the program, it often takes many years of participation in the program before beneficiaries start to generate an income from their gardens even though the beneficiaries gain immediate household savings from their gardens. For institutions like FOSIS, that kind of lag time is simply too long to wait. From CET SUR's perspective, developing the groups and focusing on training lays the necessary groundwork for beneficiaries to generate income more sustainably over time. Without making a judgment on which is correct, it is safe to say that these approaches are often incompatible and lead to few long-lasting partnerships. When partnerships do form, CET SUR and FOSIS (as well as the similarly charged SERCOTEC) are uncomfortable bedfellows.

These tensions are revealed in conversations with Rita, CET SUR's director, who explained that FOSIS's and SERCOTEC's "*lógica empresarial*" stresses individualism and competition, which is not what CET SUR promotes. She says that many of the agroecology groups that FOSIS and SERCOTEC have worked with have reduced numbers as that type of competitive rhetoric turns people off. She says that many people would rather earn a little less money, have less stress in their life and work a little less. Rita explains that economic benefits are not primarily what they work toward—they are much more about preserving the environmental quality and develop citizen participation and political power.

This ideological split was further revealed in a conversation with Andrea Rivera, a program manager at SERCOTEC, who thought that CET SUR was not doing enough to benefit the economic well-being of their beneficiaries. She went on to say that she had doubts that CET SUR recognizes that increasing income is a way to improve the quality of life for participants. She cited their anti-capitalist slant ("anti-money, anti-economy, anti-globalization"). When I mentioned that UCHO is thinking about making a private enterprise out of the compost plant, she responded that it's taken five years for them to get that far.<sup>98</sup>

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<sup>98</sup> Interview with Andrea Rivera, project manager at SERCOTEC. June 19, 2003.

CET SUR and *Vida Chile*

Despite ideological clashes, the project has made significant gains in building partnerships with some government agencies. One particularly fruitful niche that the CET SUR program found in government was through a new national health initiative called *Vida Chile*. *Vida Chile*, in fact, is a new institution, designed to encompass different departments at the national level including housing, the environment, work, and education.<sup>99</sup> Because the most challenging public health problems in Chile are lifestyle choices that require a multi-pronged approach and existing agencies were not communicating about work on parallel issues, the idea behind the initiative was to bring these institutions together to work on certain projects.<sup>100</sup>

*Vida Chile* is structured with national, regional and municipal offices. While municipalities are somewhat free to develop plans based on local needs, these plans must be approved by the regional offices and so must comply with national objectives in order to secure funding. In each comuna there exists a *Vida Chile* committee to create a Municipal *Vida Chile* Plan, which is ostensibly comprised of the mayor, community development director, health director and planning director, as well as representatives from community based organizations and private enterprises. More often than not, it is only the health department that is involved in the project.<sup>101</sup>

Despite *Vida Chile's* attempt to increase inter-agency cooperation, in many cases it is only the departments of the health that continue to fund and support the program. This reality is supported by studies, which have found that unless

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<sup>99</sup> See Appendix II for a complete listing of governmental organizations that are a part of *Vida Chile*.

<sup>100</sup> Interview with Norma Pradenas, Assessor and Social Worker for the Provincial Health Department Office in Concepción. June 25, 2003.

<sup>101</sup> Ibid. (Norma Pradenas).

circumstances are particularly urgent, individual agencies often do not have anything to gain from cooperation but often much to lose.<sup>102</sup>

The responses from *Vida Chile* representatives at the local, provincial and regional level about how they felt about CET SUR's relationship to the mission of *Vida Chile* were overwhelmingly positive. For instance, despite orders from the Regional Secretary of Health not to fund the CET SUR program, the Assessor and Social Worker at the provincial level indicated that she planned to continue to support the program in the town of Hualqui (the one town in her province in which the program is underway) because she felt the impacts of the program in terms of food security and microenterprise formation, as well as providing a healthy way for women to engage in productive social activities was so important.<sup>103</sup>

Because local health officials have placed a high value of the Toward Sustainable Cities Project, *Vida Chile* has been a regular funder of the program on the municipal level. The Toward Sustainable Cities Project has consistently been included in Municipal *Vida Chile* Plan that has been approved by the regional government. However, last year the Regional Secretary of Health announced that they would no longer fund the project. Local, provincial, and regional health officials, as well as CET SUR staff and *monitoras* know very little about why the funding is being denied to the project after many years of vocal support. Health workers frequently mentioned that they suspected that it was because the program had actually gotten too good at receiving program funds, and that regional officials believed that the Toward Sustainable Cities Project was acquiring disproportionate amounts of the Promotional Funds from the department of health. In fact, about 40 percent in Coelemu and over 50 percent in Tomé of the *Vida Chile* budget was going to the agroecology programs.<sup>104,105</sup>

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<sup>102</sup> Tandler, Judith (1993). "Reinventing the Projects." Chapter 2 in: New Lessons from Old Projects: The Workings of Rural Development in Northeast Brazil.

<sup>103</sup> Interview with Norma Pradenas. June 25, 2003.

<sup>104</sup> Interview with Francisco Fuenteabla Health Department Director & Paulina Guenante, Social Worker at the Dept. of Health. June 24, 2003.

Furthermore, because this money was going to material costs, these funds were benefiting a small number of individuals.<sup>106</sup>

However, a more likely reason why the Toward Sustainable Cities Project is losing funding at the local level is that *Vida Chile* is losing political support at the national level. President Lagos is shifting his administration's support (and funding) away from this program and toward a new program that he could claim as his signature health initiative. This program shifts the public health priority away from preventive measures to curative ones, such as the construction and maintenance of health clinics.

The dismantling of this project will put an end to what was characterized as a positive relationship for both CET SUR as well as for the many health workers with whom I spoke. The centralized structure of government in Chile, in which municipal governments are essentially administrative agents of central government, makes initiatives like *Vida Chile* particular susceptible to changes in national political winds. This upheaval can lead to considerable turbulence for a project like the Toward Sustainable Cities Project, which is looking to form long-term relationships with government agencies. As the *Vida Chile* money dries up, the Toward Sustainable Cities Project is left with no stable partnerships with government.

#### **4.2 DELIVER BENEFITS TO CONSTITUENTS**

Despite the conventional wisdom about the animosity between NGOs and government and the illustrations of this that I provided above, in the following sections, examine ways local electoral politics has had a positive impact on the Toward Sustainable Cities Project and ferret out elements of the program that were useful in gaining the support of local government officials. Two types of

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<sup>105</sup> Interview with Paulina Quintana, *Vida Chile* Director, Tomé. June 23, 2003.

<sup>106</sup> From Interviews with Paulina Quintana, Tomé *Vida Chile* Director (June 23, 2003), Norma Pradenas, Assessor and Social Worker for the Provincial Health Department Office in Concepción. (June 25, 2003) and Rita Moya, CET SUR director (June 9 and July 4, 2003).

examples illustrate the ways in which projects can use natural forces of local electoral politics to work for a program. The Toward Sustainable Cities Project uses two basic needs of elected officials to work for the program: the need to provide visible and concrete benefits to constituents and the need to raise their public profile. These examples build on previous research in the Brazilian state of Ceará, which demonstrated that allowing projects to be remodeled to accommodate the political needs of governors can lead to better project performance.<sup>107</sup>

I will start my analysis of ways to build local political support and networks with government by presenting two examples of activities that generate concrete and/or visible benefits for constituents. Linking program objectives to deliver benefits to beneficiaries with political realities to deliver to constituents is a way projects can build networks with government. These benefits can be of either a private or public nature as the two examples that I explore demonstrate: mud ovens in the homes of program beneficiaries and the large infrastructure projects of the compost plants. Elected officials favor projects that produce these types of tangible benefits because they serve as a lasting reminder to constituents of what their administration has provided.

### Mud Ovens in San Nicolás: Buying Materials, Buying Votes?

The first of these examples involves mud ovens in San Nicolás. With a total population of just under 10,000, of whom only 35 percent live in the town itself,<sup>108</sup> San Nicolás is one of the smallest and most rural of the towns participating in the Toward Sustainable Cities Project.

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<sup>107</sup> Tendler, Judith (1993). New Lessons from Old Projects: The Workings of Rural Development in Northeast Brazil. Operations Evaluation Department. The World Bank. Tendler identified four ways good governors might improve project performance by adapting programs to their political needs: (1) shortening project timelines so that the current administration could claim the results of the project, (2) “massifying” the project to reach a greater number of beneficiaries/constituents, (3) narrowing down the scope of the activity to “a single activity, single organizing logic, or a narrower or different geographic area;” and (4) addressing urgent problems.

<sup>108</sup> 2002 population figures from the National Institute of Statistics (INE). Available at: [http://www.gobiernodechile.cl/canal\\_regional.html?region=8](http://www.gobiernodechile.cl/canal_regional.html?region=8)

I accompanied a field technician to the town to discuss the program's budget crisis for the up-coming year. The project in San Nicolás is in its third year, and its budget has been steadily decreasing over that time from 8,000,000 (slightly under \$11,500) pesos in the first year to only 1,200,000 pesos (just over \$1,700) for the upcoming year. In the first year, FOSIS contributed generously to the program but has since been phasing out funding. In the upcoming year, FOSIS will not contribute anything to the program in San Nicolás. According to the CET SUR field technician, FOSIS is no longer involved in the project because the social fund has decided to focus their efforts on microenterprise type projects and that these groups simply are not at that stage.<sup>109</sup>



**Figure 4-0: A Typical Mud Oven**

Luckily for San Nicolás, not all government funding sources have dried up. Unlike many towns in which *Vida Chile* has totally retreated from funding the Toward Sustainable Cities Project, in San Nicolás they have agreed to fund some material costs. However, *Vida Chile* was quite specific about what they would fund: only the material costs associated with the first level of the program. This specificity seemed strange since the program is going to have materials costs associated with courses in three levels. For example, in the first year, most of the costs are for the garden and are associated with such inputs as seeds and materials to make the ovens. In the second year, material costs go into the greenhouses, while in the third year, program costs

go to inputs for jam-making or other skills that beneficiaries could use to start microenterprises. Why then was *Vida Chile* insisting on funding only materials for first-year projects?

<sup>109</sup> Personal communication with Marcos Rojas. June 12, 2003. Originally, FOSIS was working in three out of the 14 original towns that were selected for the project.

The answer came during a brief meeting with Silvana Neira, the project director for *Vida Chile* in San Nicolás. The meeting was impromptu, arranged on the fly by the *monitoras* and the CET SUR field technician to make sure that *Vida Chile* would commit some funds to the program in the coming year. Silvana reassured the *monitora* and CET SUR staff that they would contribute to the project. Silvana seemed particularly interested contributing to the material costs of the mud ovens.

The field technician later he revealed the logic: the mayor wants to be seen as providing concrete benefits—like the ovens—to constituents. In a sense this is like buying votes, he explained.<sup>110</sup> Characterized more benignly, the mayor—like any skilled elected official—needs to devote limited government resources to projects that provide concrete benefits to the largest number of people. Mud ovens are cheaper to build than greenhouses, which might be the next most desirable product to deliver, and therefore can be supplied to more households. These ovens are also highly valued by constituents because since they utilize wood fuel (some beneficiaries also use cardboard) instead of costly gas, they provide significant savings on fuel costs.<sup>111</sup>

The mud ovens illustrate one way to tie project goals to local political realities in which government officials keep an eye to the next election. If the fundable options for the project can be broken up into discrete activities, offering the option to fund items that give tangible rewards to supporters, such as ovens for their homes, will most likely generate the most enthusiasm and support from local government officials. This may be another incarnation of the “menu approach”—or offering elected official options to choose from according to their political needs—that research found that the more successful World Bank projects in the Ceará province utilized.<sup>112</sup> The approach of offering elected officials a variety of

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<sup>110</sup> Personal communication with Marcos Rojas. June 12, 2003.

<sup>111</sup> Interview with Valentina Pina, *monitora* from Bulnes. June 27, 2003.

<sup>112</sup> Ibid. (Tendler, 1993).

options from which to choose enables government agents to select projects that best align with their political realities.

### Compost Plants

Another popular pet project of local officials are the composting plants promoted by CET SUR. In every town, mayors, planning directors, sanitation workers, and health directors expressed their enthusiasm about these plants.<sup>113</sup> As the mayor of Quirihue explained to me that there is no reason why a mayor would object to a project like that that delivers such tangible results to his constituency.<sup>114</sup> Differing considerably from the development of small-scale, intensive gardens in people's private homes, the compost plants are obviously large infrastructure programs, which benefit the general public and require large and "lumpy" investments up-front as well as continued management and maintenance over the long-term. For this reason they are a much more difficult task to accomplish. Despite the many complications of these projects both in terms of coordination as well as cost effectiveness, they continue to garner the support of local officials and work as a way that CET SUR has formed networks with government.

The compost plants have not only secured the support of local officials but of outside funders as well. Table 4-1 reveals the domestic and international sources of funding CET SUT and local governments have received for the plants.

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<sup>113</sup> Interviews with Raul Andrade Vera, mayor of Quirihue (June 26, 2003), Nicanor Venegas (June 18, 2003), Elena Salveera, health director in Hualqui (June 26, 2003) and Jorge Negrete, Tomé planning director (June 23, 2003).

<sup>114</sup> Interview with Raul Andrade Vera, mayor of Quirihue. June 26, 2003.

**Table 4-1: Outside Sources of Funding for Compost Plants<sup>115</sup>**

Funding Source	Town	Amount	Year	Purpose
America's Fund	Hualqui	\$43,000	2001	Compost Plant
National Fund for Regional Development	Tomé	N/A	N/A	Compost Plant
The Belgium government	Tomé	N/A	N/A	Compost Plant
<i>Trabajo para un Hermano</i>	Tomé	N/A	N/A	Transitioning the compost plant to the UCHO
FOSIS	El Carmen	\$50,000	2001-2003	Compost Plant
FOSIS	Portezuelo	N/A	N/A	Compost Plant

In this section I will go into more detail about the way the compost plants generated political support and often opened up networks in government. However, first of all, I will use the compost plant in Tomé as an example to describe how these plants function.

*Waste Separation and Training*

The raw material for the compost plants is largely comprised of the kitchen and yard scraps of Tomé residents, although the plant has recently started to collect organic waste from schools and hospitals as well. The city provided buckets to 1,500 residents and the UCHO ran a training and publicity campaign promoting composting. After eight years of operation, however, only about 40 percent of those households continue to separate their wastes and leave it out for collection.



**Figure 4-2: Collection of Organic Waste in Tomé**

<sup>115</sup> Table 4-1 is a partial list based on information I gathered from interviews.

Participating household leave buckets of organic scraps out for collection on Mondays and Thursdays.

### *Collection and Processing*

The sanitation department runs their trucks along an abridged collection route twice a week to collect the organic material. The trucks deposit the waste at the plants and workers pile the material into piles and cover them with straw.<sup>116</sup> The digestion period lasts for 45 days, with workers turning the piles every 15 days or



Figure 4-3: Compost-making in Tomé

when the internal temperatures of the piles reach exceed 140 degrees Fahrenheit. The workers carefully monitor the temperature of the piles to make sure that the material is degrading rapidly and that the interior of the pile continues to get the necessary oxygen for biodegradation. After the digestion phase, the piles are moved into smaller piles for the maturation stage, in which they are treated with worms. This phase also lasts about 45 days. Finally, the compost is sifted and stored in small plastic bags for redistribution to the households that participated in separating their waste.<sup>117</sup>



Figure 4-4: *Monitora* with worms

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<sup>116</sup> Three full-time workers are employed at the plant through the city's employment program. These workers receive the minimum wage.

<sup>117</sup> Observation from a meeting of CET SUR staff, Tomé sanitation department technicians, UCHO representatives and compost plant workers. June 13, 2003.

*Management of the Plant*

The one plant currently functioning in Tomé is owned and operated by the city, although the UCHO is currently in talks with the sanitation and planning departments about transferring ownership to the group. Every indication from government officials, CET SUR staff and beneficiaries is that this plan to transfer ownership will move forward.<sup>118</sup> When this happens, the city will still collect the waste in the trucks owned by the sanitation department, but they will pay the UCHO a small amount to dispose of it, like they would pay for waste disposal at a landfill.

*The Trash Crisis in Tomé: Costs to the City of Closing the Dump*

Despite the local support these compost plants have garnered in every town, Tomé is the only one where the composting plants have actually been fully implemented. Eight years ago, CET SUR received money from the National Fund for Regional Development for the construction of the plants in Tomé. One plant is currently in full operation, while one was forced to close down due to nuisance problems related to odors and insects. A third plant is planned for construction on the old municipal dumpsite, which CONAMA has forced the city to close. The reason for this limited success of the compost plants goes back to the complicated nature of the task itself: the need to train residents to separate their waste, to run collection trucks on extra days, and to coordinate with not only an NGO on the project (CET SUR) but also a community-based organization (the UCHO).

In Tomé, however, a looming waste management crisis has tipped the balance in favor of the compost plants despite this difficulty. The city has been dumping its trash for twenty years in an eight-hectare dump that never had authorization from CONAMA to operate. Ten years ago the Department of Sanitation and Beautification started to partially manage the in-coming waste. The department

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<sup>118</sup> From Interviews with Tomé Planning Director (Jorge Negrete), the UCHO, CET SUR staff (Director and Field Technicians) and Tomé sanitation workers.

began to compact the trash, put levels of soil between the waste layers and install ventilation pipes. Still, due to the recent collapse of the dump, the city is developing a plan to close it permanently. In fact, the town actually has not disposed of any trash at the site since the end of 2002, when it was covered. One large portion of the land is so contaminated that the Health Department is requiring the town to close it off indefinitely or, “for thousands of years.”<sup>119</sup>

Because the city is forced to close the dump, they now have to pay to transport and dispose of municipal waste at a distant sanitary landfill. While the dump is only a little over a mile outside the city, the landfill in Concepción is over fourteen miles away. To make matters worse, that landfill is quickly reaching capacity and when it closes, the only remaining disposal option is over thirty miles away in Coelemu.

### *Benefits of Composting*

Waste is in the eye of the beholder. In Tomé, nearly 60 percent of the waste stream is organic and therefore could potentially be composted. Clearly, the potential of avoiding the costs of transporting and disposing of waste—especially when these costs are increasing dramatically—is a powerful incentive to take action.

While the advantage of avoiding the transport and disposal costs might be the most tangible for municipalities, it is not the only benefit the compost plants offer. Improving the quality of degraded urban soils and encouraging a method of food production that is free of agrochemicals are additional, but perhaps from the perspective of government, only ancillary benefits of the plants.

### *Complications of Composting: Nuisance and Incentives to Participate*

Although the benefits of these plants can be compelling, the drawbacks can also be potent. Nuisance issues, for example, can be a big problem at these plants.

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<sup>119</sup> Interview with Jorge Negrete, Tomé Planning Director. June 23, 2003.

As one worker put it, “we’re not recycling perfume here.”<sup>120</sup> In fact, as mentioned above, one plant was forced to close due to nuisance issues and its location near a school, even though the plant was a prior use. The odors and insects that the plant attracted drew vocal complaints from parents and teachers. While the sanitation department hopes to reopen that plant soon,<sup>121</sup> field technicians from the sanitation department of and from CET SUR are working together to maintain the other functioning plant, which is located in a residential area, so that the odor, insect and rodent problems are avoided. I attended one meeting at the plant on how to resolve these issues, and the problem was unfortunately still evident: the smell was at times quite offensive.

Sustaining the participation of households to continue to separate their household waste and leave it out for collection and delivery to the compost plants has proven to be another complication in the project. As mentioned earlier, only 600 households of the 1500 trained continue to put their organic waste out for pick-up.<sup>122</sup> This low participation rate means that the plants receive only a fraction of the inputs they require to operate at full capacity.

However, since the compost plant near the school was forced to close, the other plant has been operating at full capacity and is actually unable to process all the material delivered to it by the city. This plant now receives the steady stream of organic material that previously went to two plants. Prior to that plant’s closing, however, both plants were operating at less than 60 percent capacity.<sup>123</sup> The problem was primarily one of access to inputs. Yet the city, with cooperation from CET SUR, is planning a new compost plant on the site of the old municipal dump. The city seems determined to increase the household participation rate.

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<sup>120</sup> Observation from a meeting of CET SUR staff, Tomé sanitation department technicians, UCHO representatives and compost plant workers. June 13, 2003.

<sup>121</sup> Interview with Nicanor Venegas, project engineer. Tomé Department of the Environment and Beautification. June 18, 2003.

<sup>122</sup> Interview with Jorge Negrete, Tomé Planning Director. June 23, 2003.

<sup>123</sup> Interview with Jorge Negrete, Tomé Planning Director. June 23, 2003. The plants process 103 tons per year when the capacity is around 180 tons.

Consequently, the city is looking for ways to strengthen incentives to participate. The city already distributes bags of compost to the households that participate in separating their waste, but that alone has not been sufficient. Another incentive that the planning department has explored is waiving the trash collection fee for households that participate. This fee, which is slightly more than \$8.00 per year, is folded into property taxes for the few households that are actually required to pay this



Figure 4-5: Plant worker with a finished bag of compost to distribute to households that have participated in separating their waste.

tax. For the remaining households whose property is appraised below the taxable level, the city is responsible for collecting these fees door-to-door, an unattractive and difficult task. *Recuperamos muy poca plata, casi nada* (“We recover very little money, almost nothing”), attested the municipal planning director, adding that they hardly bring in enough money going door-to-door to pay the person’s salary who does that job. Furthermore, the income level of many households falls below the cut-off point for charging for trash collection. All told, only about 10 percent of households pay this fee.<sup>124</sup> Because so few people currently pay for trash collection, providing incentives to participate in the composting program by waiving these fees will not be a very effective incentive. Still the municipality continues to explore different possibilities to increase participation.

### *The Economics of Composting*

Several factors complicate the cost effectiveness of these compost plants. One is the low participation and collection rate. When functioning at what the planning director described as their full functioning capacity of 180 ton/year, the plant would only net around \$3500, according to a study by *Trabajo para un Hermano*

<sup>124</sup> Interview with Patricia Hormazabal, Geographer and Management Coordinator at CONAMA Regional Office in the 8th Region. June 11, 2003.

financed by the America's Fund.<sup>125</sup> When the collection rate is only 60 percent of what was planned, the cost effectiveness dips to precariously low levels.

Another factor that jeopardizes the costs effectiveness of composting is the low price of compost's nearest competitor in the marketplace, *tierra de hoja*. Firms collect this product, which literally translates as "earth from leaves," from the forest bed—much to the chagrin of environmentalists who note how the practice depletes forest soils of necessary nutrients—and are able to sell it for low prices. At the Home Store, the Chilean equivalent of the Home Depot, bags of *tierra de hoja* sold for 5 kg = 930 pesos (186 pesos/kg) while bags of *tierra orgánica* (or compost) sold for 4 kg = 995 pesos (248.75 pesos/kg).

Also significant factor is the low cost of waste disposal. Until towns are forced to internalize the full costs of waste disposal—instead of externalizing the long-term environmental hazards—the financial incentives to separate organic wastes for composting may not exist. In Tomé, the city is beginning to internalize these costs by being forced to dispose of its waste in a sanitary landfill as opposed to merely the town dump, which is building political will for waste management strategies like composting to emerge.

### *Composting in Hualqui and Quirihue*

Aside from Tomé, no other town in the Toward Sustainable Cities Project has successfully completed a composting plant. Two towns—Hualqui and Quirihue—had ambitious plans to do so, but in both cases, the projects were undermined before they got off the ground. Interestingly, neither of these towns is facing the type of waste management crisis that is confronting Tomé. Both towns continue to use nearby dumps for trash disposal and because they have not yet collapsed, CONAMA has not intervened. Although in both of these towns government

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<sup>125</sup> Granifo, Jorge (March 2002). "Estudio de Planta compostaje Unión Comunal de huertos Orgánicos de Tomé." Through the project "Expansión y consolidación de actividades de reciclaje de residuos sólidos domiciliarios de Tomé."

officials strongly supported the project from the beginning, once complications developed, the political will to see the project through to fruition disintegrated.

In Quirihue, despite the mayor's willingness to donate his own land to the project, he was not willing to spend the political capital to overcome obstacles that arose. The primary problem in this town was siting the plant. According to CET SUR, it was CONAMA's red tape on siting that undermined the plans to build the plant.<sup>126</sup> The city found what they thought was a suitable location for the compost plant on their landfill but CONAMA did not clear the site.<sup>127</sup> According to the mayor, however, it was CET SUR's requirements that the plant be on municipal land that led to its early death. In any case, despite the mayor's comments that any mayor would support the composting plants because they demonstrate that government is hard at work for the people,<sup>128</sup> the first major obstacle in the road derailed the project.

In Hualqui, plans to construct a compost plant encountered other difficulties. Despite remarkable initial support, the mayor threw in the towel rather than attempt to free the project from the capture of local elites. In this case, these elites were neighborhood association leaders recruited to manage the grant money received for the project.<sup>129</sup>

After an optimistic first year in the Toward Sustainable Cities Project, local officials in Hualqui sought outside funding to support the construction and management of a composting plant. The planning director applied to the

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<sup>126</sup> Interview with Rita Moya, CET SUR Director. July 4, 2003.

<sup>127</sup> In an interview with Rita Moya, the CET SUR director, she implied that CONAMA was in bed with the landfill companies. These companies are foreign-owned and she noted that it is not in their interest to have a recycling plant taking away the source of their profit. She said that they had a meeting with all the mayors involved in the project (from the 8 comunas) and representatives from CONAMA and at the last minute, CONAMA withdrew support for the proposal. They instead are subsidizing the sanitary landfills, helping to pay for transfer stations for municipalities. When I asked her why she thought CONAMA had changed their minds like this she said she supposed there are dark forces at work.

<sup>128</sup> Interview with Raul Andrade Vera, the mayor of Quirihue. June 26, 2003.

<sup>129</sup> Information reported here about the compost plant in Hualqui came from an interview with the health director, Elena Salveera on June 26, 2003.

## CHAPTER FOUR

America's Fund for a grant to implement a composting program. The application was successful and the town received a grant for 30,000,000 pesos (~\$43,000). The planning director developed an implementation plan, acquired the land and even bought 1,500 buckets to distribute to households to separate their wastes.

Because one of the objectives of the America's Fund is to strengthen civil society, they require that the projects they fund be operated by a legally recognized community based organization. However, the agroecology groups were only one year into the program, and they were not ready to incorporate formally into a group. Instead, the municipality contracted the neighborhood association to operate the project.

Unfortunately, the neighborhood association leaders were a poor choice. Not only were they inexperienced project managers and not necessarily representative of the community, the leaders of the neighborhood associations also had no commitment to the idea of a compost plant. However, they suddenly had a salary, an office, a cell phone and a computer, which made the other neighborhood association leaders and members envious. No one understood the process for administering the funds and implementing out the plan, not even the mayor and the health department who were the ones who secured the funding. If the agroecology groups had formed into a group like the UCHO and they had been the ones to administer the project, perhaps the project would have fared better. As it was, the difficult task of implementing a compost plant was left to actors outside the Toward Sustainable Cities Project who had no allegiance to the program and no incentive not to cheat the system.

In the end, the composting plant in Hualqui never got off the ground, despite the fact that local officials leveraged outside funding for the project and secured land and materials. The high expectations of the project led to considerable frustrations, especially on the part of the mayor who was quite aggravated about the compost program and the obfuscation on the part of the neighborhood

association leaders. Instead of developing a way to make it more transparent, however, the mayor simply gave up on the whole project.

Initial support of myriad local officials from the mayor to sanitation workers and planning directors for the compost plants demonstrate the way local governments get behind visible and concrete projects that could generate political capital for elected officials. However, the complicated nature of the task of building, operating and maintaining a compost plant, in contrast to the relatively simple task of building a mud oven, has limited the capacity of governments to see these projects through. Despite the limited success rate, these plants have still served as a springboard for CET SUR to develop networks with government.

#### **4.3 HIGH PROFILE EVENTS**

While the mud oven and compost plant examples in the previous section highlighted ways in which project goals can tap into the need of elected officials to deliver results to constituents (some more successfully than others), this section will illustrate the ways high-profile events can generate political support. These events provide a forum for elected officials to both demonstrate their connection with the interests of the people as well as raise their public profile. In this section, I review two such types of events: the municipal fairs in Hualqui and the seed exchanges that I observed in Quillón and Quirihue.

##### The Fair in Hualqui

The fairs in Hualqui have become major town events ever since the beneficiaries of the Toward Sustainable Cities Project began to steal the show. The fair has a record turnout in 2002, in which the women sold out of all their wares: the roasted corn, *juezilla* (peach juice) and *moti* (shelled wheat), different types of bread, yogurt and carrot desserts, and new kinds of *empenadas* including pear and Swiss chard. As a result, the town expanded the fair to two two-day events in January and February of 2003. At both occasions the central plaza was mobbed with people and the women again sold out of all their goods. These fairs now

have a reputation for their gastronomic delights because, even though there are also some folk singers and artisans that attend, their skills are eclipsed by sights and smells of the food prepared by the Toward Sustainable Cities Project beneficiaries.<sup>130</sup>

The event has also attracted media attention. An article from the regional newspaper, *El Sur*, detailed the success of these women, which has turned the annual corn festival into something much bigger.<sup>131</sup> In the article, three women from the program were interviewed and discussed their experiences with the Toward Sustainable Cities Project. They described their experiences forming microenterprises with the help of FOSIS. One woman explained the value of the program saying, “our comuna has *campesina* roots and that is what we are trying to preserve.”

In Hualqui, the Toward Sustainable Cities Project has also been relatively successful in attracting participants: in the first year they had 30 families, the second year 90 and last year they were up to 190. Also striking about the project in Hualqui is the number of microenterprises that have sprung up as offshoots of the program. The women have started a small catering business, which serves large municipal events. Several women have opened up a new confectionary store with a small grant from FOSIS. A small kiosk, from which another group of beneficiaries have plans to sell *empanadas*, has also opened up in front of the health clinic.

Elena, the Health Director in Hualqui, described one of the reasons why the program has done so well as the visibility the program has garnered from the fair. The early days of the CET SUR’s involvement in Hualqui took place in much different circumstances than it did in Tomé, which started during the dictatorship. Because the project has been able to tap into government resources, it has

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<sup>130</sup> Interview with Elena Salveira, Director of Health. June 26, 2003.

<sup>131</sup> entitled, *Fiesta en Hualqui, Lo mejor del campo* (“The Party in Hualqui, the Best of the Country”), dated March 2, 2003. The article

developed at a much faster pace than it did in Tomé where, for the first eight years or so, it was practically invisible. She explained that in Hualqui, they advertise this project and try to get people to participate. The fairs have been crucial to this visibility and have brought out the mayor and other elected officials who have made public statement supporting the Toward Sustainable Cities Project. She says the mayor likes big events such as the artesian fair because they are high profile events that help him look good.

### *The Seed Exchanges*

Another way in which the Toward Sustainable Cities Project is able to draw in local political support for their work is through the two seed exchanges—or *Trafkintus*.

The word *Trafkintu* is from the Mapuche language, and a *Trafkintu* is a tradition of the Mapuche people for the continued supply and renovation of seeds. CET SUR and UNDP sponsor the activity to preserve the biodiversity of the seed stock in Chile, especially rare species of plants, and the knowledge of how to save and grow them. CET SUR has been organizing these events in the 8<sup>th</sup> and 9<sup>th</sup> Regions of Chile over the past couple of years. In the 9<sup>th</sup> Region, both Hualqui and Tomé have hosted these events. In June, Quillón and Quirihue hosted *Trafkintus*.

At each event about 50-100 local growers—mainly beneficiaries of the Toward Sustainable Cities Project—attended. The mood was very festive, but serious work took place. Only those who brought seeds were allowed to enter the trading floor. Groups from each town set up tables with banners of their group's names, packages of labeled seeds and sometimes even displays of how they grow their food: diagrams of how to build a raised bed, how to compost, or how to build a greenhouse. The *Trafkintus* do not allow any commercial activity. The spirit behind the event is to share and exchange knowledge. After the seed trading is complete, everyone gathers at a large table in the center of the room for a big pot luck lunch, consisting mainly of breads baked in the mud ovens of program

beneficiaries' homes but also tea and jam. Both events ended with spirited renditions of the Chilean national dance, the *Cueca*.

More relevant to the topic of this chapter, however, is how these events began. At both events, local officials, CET SUR representatives and program beneficiaries made speeches, but in Quillón, the speechmaking took on epic proportions. The event filled the local gymnasium, local officials addressed the crowd, often giving explicit support to the Toward Sustainable Cities Project, the media came out and the event went on twice as long as planned. All speeches were about the virtuous nature of the urban agriculture program: its impact on the lives of the beneficiaries (keeping them active, generating income, improving their diet, helping them meet and make friends with their neighbors), the way it preserves biodiversity of local food crops, the benefits of continuing the Mapuche tradition of trading seeds (and how they belong to everyone not multinational corporations) and preserving the rich heritage of the Mapuche tradition. These speeches by local officials attesting to the value and importance of the Toward Sustainable Cities Project solidify CET SUR's local support.

The Hualqui case illustrates the point that fun, celebratory events that draw large crowds and media attention also tend to draw the support of government officials who also want to use these events to raise their profile among their constituents. Planners who manage these types of projects may want to take the time out from the nuts and bolts details of their projects to organize large celebratory events or, even better, to leverage existing ones, as the agroecology groups were able to do with the fairs in Hualqui. The *Trafkintu*, like the fairs in Hualqui, create high profile events that local officials can capture to demonstrate their connection with issues of importance to their constituency and raise their public profile. Elena, the health director in Hualqui, mentioned the *Trafkintu* as a major event on the mayor's calendar.<sup>132</sup>

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<sup>132</sup> Interview with Elena Salveera, Director of Health. Hualqui. June 26, 2003.

## CONCLUSIONS

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What is most conspicuous about urban agriculture in Santiago is its absence. Despite the talk of the *ollas comunes* (community kitchens) and community gardens, the truck farmers and the *amasanderías* (bread baking groups) of the 1980s, modern Santiago is strikingly bereft of these activities. An occasional program for seniors exists here, a demonstration garden at the environmental center there, but they are few and far between.

In contrast to Santiago, gardens are pervasive in Tomé. Five thousand residents (16 percent of the town's adult population) have been trained in agroecologic gardening methods. Six hundred households regularly separate their organic waste for composting. CET SUR has had a presence for over twenty years in this small town, and the NGO is showing no sign of losing momentum. In fact, the program is expanding. The NGO began a new program in 1999 entitled the Toward Sustainable Cited Project to teach these methods in seven new towns.

The relative success of CET SUR's urban agriculture projects is a puzzle. How has this program achieved this longevity and managed to grow its program expansion while similar projects that began at the same time in Santiago leave little mark on the *mancha de aceite*?<sup>133</sup>

A full explanation of this puzzle would require tracing the history of urban agriculture in Santiago in the 1980s. As little trace is left of these activities, it is beyond the scope of this research. Instead, this investigation explores two features of CET SUR's work that distinguish it from similar programs and that may point to an explanation of this puzzle—or at least lay the groundwork for further research.

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<sup>133</sup> Literally, "oil stain," referring to the rapidity with which Santiago is expanding.

### **Motivating the *Monitoras***

The first set of factors to explain the relative success of CET SUR's work is the NGO's use of community-based agents, *monitoras*, to carry out on-the-ground activities including teaching the basic agroecology coursework to beneficiaries, but also recruiting new members to the program and managing some aspects of the local budget. This alone does not distinguish the Toward Sustainable Cities Program from other urban agriculture programs, but the way the program maintains a high level of dedication to the job, especially in the face of a three-year training unpaid period, indicates a shift from business as usual. Maintaining high worker morale and motivation is a concern for any organization but especially for those that employ workers who spend most of their time unsupervised in remote locations.

The factors that motivate a program beneficiary to become a *monitora* in the Toward Sustainable Cities Project certainly vary from individual to individual according to personal preferences and needs. This reliance on multiple factors—monetary as well as non-monetary—to motivate distant, frontline workers contributes to better motivation and dedication on the part of the *monitoras* and better project performance overall. Two factors such are particularly significant.

The first is the opportunity CET SUR offers the *monitoras* for personal development. This development ranges from skills related to the program, such as agroecology and leadership training, to the opportunity to complete and receive certification for the basic education that many of these women have missed. The latter endows the women with a transferable skill that will benefit them no matter what they do in the future.

The second way the Toward Sustainable Cities Project maintains a high level of worker satisfaction is by granting discretion to the *monitoras*. The autonomy to be an actor in the program rather than “mere spectators in the decisions that come

## CONCLUSIONS

from government or from other centers of power,”<sup>134</sup> to borrow CET SUR’s own language, is a noteworthy way to maintain a high level of dedication to the job.

The issue of worker discretion is a complicated one because it involves finding the right balance, or tension, between central control and the autonomy of frontline workers. CET SUR limits the discretion of the *monitoras* to minimize potential costs from inefficiently low class sizes. Granting this discretion, however, provides several valued benefits to the NGO, which may be as important as improving worker morale, such as reducing program operating costs by using the *monitoras* to carry out activities less expensively than central staff and being able to recruit more beneficiaries to the program.

Enhancing community recognition of the work of the *monitoras* is a yet untapped force that could contribute to the job satisfaction of the *monitoras*. Tapping into the human desire for recognition and praise may be at odds with program goals but could provide powerful incentives for workers to stay motivated as well as enable healthy levels of accountability. Comments from the *monitoras*, such as their preference to be called *monitora* rather than *promotora*, as well as their pride in their work, suggest that this could be a powerful way to motivate these frontline workers. A campaign to highlight to work of the *monitoras* could also bring other benefits to CET SUR, such as increasing the recognition of their programs and increasing the number of potential beneficiaries. Such as campaign could potentially increase accountability for *monitoras*, as in the case of Ceará, Brazil, in which a promotional campaign boosted worker morale but also gave residents a sense that they should report any misconduct to central offices.<sup>135</sup>

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<sup>134</sup> From CET SUR’s website, available at [www.cetsur.cl](http://www.cetsur.cl)

<sup>135</sup> Ibid. (Tendler, 1997).

## Networks with Government

The second set of factors that have made the Toward Sustainable Cities Project more successful is the myriad relationships CET SUR has developed with government. CET SUR seeks these partnerships with government to exploit the existing networks of government to reach more people with their program in a new town, to secure funding for projects and to tap into the expertise of government professionals. CET SUR has accomplished all of these objectives at one time or another. The NGO receives funding from the Ministry of Education, FOSIS, SERCOTEC, and occasionally from CONAMA. CET SUR works in the schools, developing eco-clubs for youth, partners with the planning department to develop plans, and reports on the compost plant and with the sanitation department to manage the technical issues relating to the plant. These partnerships have paid off: recall that it was actually the mayor of Tomé that presented CET SUR and its work to the mayors of the other towns in the region when the NGO wanted to expand the program.

We may typically think of NGOs and government institutions as not being particularly cooperative. In fact, comments made by government officials and NGO leaders indicate that mutual distrust persists. For instance, the mayor and health director of Quirihue, expressed that they dislike NGOs because they get a disproportionate amount of funding that governments could use more efficiently.<sup>136</sup> The CET SUR director made it very clear that the NGO does not bend to the will of governments and will not alter their programming just to receive more funds.<sup>137</sup>

Despite these testy undercurrents, partnerships develop between NGOs and government when the project merits the effort. For instance, the mayor of Quirihue's comments did not check his enthusiasm for the idea of building a compost plant in the town, a project for which he was willing to donate his own

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<sup>136</sup> Interview with Raúl Andrade Vera, mayor, and Samuel Cerro, health director. Quirihue. June 26, 2003.

<sup>137</sup> Interview with Rita Moya, CET SUR director. July 4, 2003.

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land, and although CET SUR may not reinvent its programming to align with the current objectives of government, the NGO certainly structures its activities to take advantages of potential synergies. Two examples of ways in which CET SUR does this is tapping into the needs of local politicians to providing concrete benefits to constituents and creating high profile, media events to improve their recognition or reputation in the town.

Concrete benefits can be either public or private as demonstrated by the examples of the mud ovens for private households in San Nicolás and the compost plants in Tomé, Hualqui and Quirihue described in chapter four. While building a mud oven is a much simpler task than constructing and maintaining a greenhouse, efforts at both activities build the types of partnerships with government that CET SUR seeks.

The fairs in Hualqui and the seed exchanges in Quirihue and Quillón illustrate another activity that links the NGO's objectives of the Toward Sustainable Cities Program with the need of local elected officials to maintain a high profile in the community and connect with the interests of their constituents. These types of events build awareness and support from local elected officials and create enabling environments for future partnerships.

Interestingly, these interdependencies—the funding that CET SUR does receive from government sources, such as Vida Chile, make the NGO more accountable. The recent decision of the higher-ups in Vida Chile to cease funding the Toward Sustainable Cities Project forces CET SUR to seek other sources of funding and demonstrate that their work deserves this funding. For instance, CET SUR is now attempting to use funding from the *Programa Puente of Chile Solidario* to pay for some of the material costs of the program. The flexibility to secure new funding sources when old one dry up demonstrate that the NGO is providing a valued service.

Both of these sets of factors help account for CET SUR's longevity in Tomé as well as its recent expansion to the seven new towns with the Toward Sustainable

## *CHAPTER FIVE*

Cities Project. The way the program motivates frontline workers and its myriad linkages with government institutions are unusual and draw attention to themselves as ways that the project has maintained a high level of performance over the past two decades.

## APPENDIX ONE

### Food Production by Town (2002), surveys completed by local *monitoras*.

Hualqui in 2002	Production of Vegetables	Indicator	Year one
	by family	Square meters of land	3.6
		Production (kg)	14.8
		kg of food/square meter	4.1
	Total families surveyed	158	95
Bulnes, 2002	Production of Vegetables	Indicator	Year one
	by family	Square meters of land	7.9
		Production (kg)	32.4
		kg of food/square meter	4.1
	Total families surveyed	39	39
Tome, 2002	Production of Vegetables	Indicator	Year one
	by family	Square meters of land	4
		Production (kg)	16.4
		kg of food/square meter	4.1
	Total families surveyed	32	32
Ranquil, 2002	Production of Vegetables	Indicator	Year one
	by family	Square meters of land	6.2
		Production (kg)	25.4
		kg of food/square meter	4.1
	Total families surveyed	11	11
Quillón, 2002	Production of Vegetables	Indicator	Year one
	by family	Square meters of land	10.6
		Production (kg)	43.5
		kg of food/square meter	4.1
	Total families surveyed	24	24

Quirihue, 2002	Production of Vegetables	Indicator	Year one
	by family	Square meters of land	4.9
		Production (kg)	20.1
		kg of food/square meter	4.1
	Total families surveyed	25	25
San Nicolas, 2002	Production of Vegetables	Indicator	year one
	by family	Square meters of land	7.1
		Production (kg)	29.2
		kg of food/square meter	4.1
	Total families surveyed	57	57
Coelemu, 2002	Production of Vegetables	Indicator	Year one
	by family	Square meters of land	4.1
		Production (kg)	16.9
		kg of food/square meter	4.1
	Total families surveyed	49	49
TOTAL LEVEL ONE	Production of Vegetables	Indicator	Year one
	by family	Square meters of land	6.05
		Production (kg)	24.9
		kg of food/square meter	4.1
	Total families surveyed	395	332
	TOTAL (kg)		8258

## **APPENDIX TWO**

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The national council of *Vida Chile* consists of:

1. Ministry of the Interior
2. General Secretary of the President
3. General Secretary of the Government
4. Ministry of Planning and Cooperation
5. Ministry of Education
6. Ministry of Work y Social Planning
7. Ministry of Health
8. Ministry of Housing, Urbanism and National Goods
9. Ministry of Agriculture
10. Ministry in Service of Women
11. The National Police (*Carabineros*)
12. National Council for the Control of Narcotics
13. National Commission for the Environment (CONAMA)
14. National Committee for Seniors
15. Scientific Council on Tobacco and Health
16. General Office on Sports and Recreation
17. Solidarity Fund for Social Investment (FOSIS)
18. National Institute for Youth
19. Foundation INTEGRA
20. National Council on Financial Assistance and Scholarships
21. National Council on Preschools

22. Pan-American Health Organization

23. National Department of the Consumer

24. University of Chile