COMMUNITY GARDENS ON THE URBAN LAND USE PLANNING AGENDA

Experiences from the United States, Germany, and the Netherlands

by

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INTRODUCTION

Community gardens have a long history as a part of urban development in the United States, from the initial establishment of community gardens as relief from widespread food shortages in the 19th century, to their present day function as green oases in center cities. Tracing the history of community gardens in the United States, it becomes clear that during periods of government support, community gardens have flourished. Unfortunately, throughout the years, official government support for community gardens has come only during times of economic depression and political crisis, when gardens were viewed as necessary to ensure food security and improve the morale of civilians on the homefront. In today’s more prosperous economic times and stable political climate, government officials and local land use planners view gardens as dispensable, replacing gardens, which have been rooted in their local communities for over 20 years, with more lucrative land uses. Since the 1970s, community gardens have been a critical part of the urban fabric in many cities throughout the United States, most importantly contributing to the urban revitalization of distressed inner-cities. Community gardens throughout the United States clearly warrant official government support to ensure the preservation and even expansion of these irreplaceable community assets.

The primary objective of this research project is to propose strategies for incorporating community gardens into land use policy and planning in the United States, drawing upon experiences from the United States, Germany, and the Netherlands.

The first section of this paper briefly provides the rationale for this research project. That is, this section describes why it is important for community gardens to be an urban land use and, in so doing, shows why local land use planners should incorporate community gardens into land use policy and planning. More specifically, this section presents some of the economic, social, and environmental impacts community gardens have on urban communities and, in particular, discusses the role the gardens play in local economic development and urban revitalization.

The remaining sections of the paper are implementation-oriented, discussing the various strategies used in the United States, Germany, and the Netherlands to protect community gardens through the land use planning process.

The section on community gardens in the United States briefly traces the history of community gardens, and then discusses some threats to community gardens in the United States, drawing upon recent experiences in New York City and similar experiences in other cities. After discussing the impediments to community gardening in some cities in the United States, including restrictive policies that fail to designate community gardens in land use plans and zoning maps, and unsupportive government authorities that would rather attract more lucrative land uses to community garden sites, the section presents some of the strategies local governments in other cities in the United States—namely Chicago and Seattle—have used to protect community gardens. The two main strategies that are discussed are the formulation of open space plans, which identify existing and potential community garden sites and set forth implementation measures to protect and acquire these sites, and the designation or creation of a government agency responsible for overseeing community gardening activities.

The two sections following the discussion of community gardens in the United States look at community gardens in Germany and the Netherlands, in hopes of discovering ways in which the German and Dutch approaches to integrating community gardening into land use policy and planning might be transferable to the United States. Despite socio-economic and political differences between the countries, in addition to differences in the planning processes, cities in the United States can clearly learn lessons from these two countries, as community gardens have a longer tradition in Germany and the Netherlands and have long
been accounted for in the land use planning processes in those countries. Indeed, the community gardening movement in the United States presently lags that of Germany and the Netherlands by about 150 years, with the initial purposes of community gardens in Europe being food security and the environmental improvement of inner-cities, and those very objectives being the driving force behind the community gardening movement in the United States today. Therefore, by looking at the triumphs and challenges to community gardens in these two countries, the United States could learn from how community gardeners have more effectively organized to get community gardens on the urban land use planning agenda and how relevant government officials have accounted for these expressed interests in the local land use planning process. More specifically, in these two sections, national policies regarding community gardening and local land use planning are discussed, in addition to the roles gardening associations and responsible government agencies play in managing the day-to-day gardening activities and ensuring the long-term protection of the community gardens.

The final section of this paper summarizes the findings of this research by offering some lessons learned, or strategies to integrating community gardens into land use policy and planning that could be transferable across national boundaries. The first part of this final section briefly summarizes the key research findings by each country, and the final part looks across the case studies to propose some strategies for incorporating community gardens into land use policy and planning in the United States. The four main recommendations discussed are inclusion in local plans, inclusion in state and federal policies, designation of responsible local government agency, and collaboration between public, private, and non-profit actors.
COMMUNITY GARDENS AS A Viable USE OF URBAN LAND

Many land use planners refuse to consider community gardens as an appropriate use of urban land since gardens might not make the “highest and best” use of city land as defined by policy-makers who might rather attract “better” tax-paying uses on this land. However, community gardens have social and environmental benefits that are scarcely given a monetary value, yet these non-monetary returns should be accounted for when considering the legitimacy of community gardens as an urban land use. Moreover, there has been a recent trend throughout many countries, and in particular in the United States, for community gardens to become market gardens, therefore, also contributing to the economic health of local communities. Indeed, since community gardens have positive economic, social, and environmental impacts on local communities, community gardens have been regarded as a desirable element of sustainable development. Figure 1 further details how community gardens fuse together the three components of sustainable development—economic, social, and environmental progress—to help contribute to an enhanced quality of life in urban communities. To name a few, with respect to economic progress, many community gardens provide jobs and training for local residents, and help create local economies; with respect to social progress, community gardens allow people of all incomes access to low-cost and fresh food, offer outdoor education opportunities, and provide a focal point for community gathering; and with respect to environmental progress, community gardens provide desperately needed greenspace in underserved communities, and contribute to resource conservation through composting and by-products exchanges. All in all, community gardens prove that economic, social, and environmental progress need not be mutually exclusive, but rather can be mutually reinforcing.

Few deny the invaluable contribution community gardens make to food security, improved nutrition, beautification, environmental education, and improved waste management. In fact, most people do find value in the concept of community gardens, just not as an urban land use. The remaining part of this section takes a closer look at the integral role community gardens play in planning strategies aimed at improving urban environments, thus establishing community gardens as a desirable and even necessary urban land use.

Local Economic Development

Community gardens have played an integral role in the economic development of inner-city communities and, therefore, are essential parts of the urban fabric.

In today’s age of economic globalization, there is a struggle to link economic development to local needs and opportunities. More specifically, globalization has left specialized local economies vulnerable to ever-changing conditions in global markets, bypassed marginalized communities in the inner-cities, and failed to develop local skills and foster a spirit of entrepreneurship (Newby 1999). As of recent, entrepreneurial
or market gardens have emerged in the United States as a means of fostering local economic development in urban communities that have been largely ignored in the process of globalization. These community gardens reconcile economic development and environmental protection, at the same time as linking development to local needs and opportunities. Key features of these projects include capacity building and training programs, the establishment of an environmentally responsible community enterprise, the generation of employment for members of the local community, and the ability to meet local needs through local resources.

Although a recent study of 27 market gardens across the United States showed that these projects are far from self-sufficient—on average the market gardens raised about 29 percent of its total expenses from product sales—the gardens provide other long-term benefits to a community’s economic development potential such as job skills and leadership development (Feenstra 1999). For example, in San Francisco in 1983 a group of gardeners, calling themselves the San Francisco League of Urban Gardeners (SLUG), formed to develop a plan for local economic development through the creation of locally-owned and operated community gardening enterprises. One of the main projects of SLUG is *Urban Herbals*, a community-enterprise that hires young people from low-income communities to produce fruit jam, flavored vinegars, fresh salsa, and honey from produce grown on SLUG community gardening sites. The youth that work as a part of the *Urban Herbals* project learn all aspects of business, including manufacturing, packaging, and marketing of the products, in addition to gaining valuable leadership skills. Even though in 1997, the project incurred expenses totaling $72,000, and generated only $25,000 in sales, job training, leadership development, and the fostering of an entrepreneurial spirit have proven just as critical to the economic development potential of the community than actual revenues.

**Urban Revitalization**

Community gardens have played an integral role in the United States in revitalizing inner-cities plagued by abandoned and contaminated lots. Since the 1960s, in many cities across the United States, particularly New York, Boston, Philadelphia, and Detroit, local initiatives have reclaimed their neighborhoods from urban blight by converting vacant lots into safe and productive uses as community gardens. As a result of these community gardens, the quality of life of these inner-city environments has improved—inner-city residents, traditionally underserved by open space resources, enjoy access to nature and recreation space in their immediate environment, crime rates in neighborhoods in which community gardens are located have declined, and the property taxes in surrounding areas have increased. In fact, quality of life in these communities has been so improved that housing and commercial activities are now attracted to these revitalized areas. As a result, development pressures are threatening the very existence of one of the key ingredients that made these locations desirable in the first place—the community gardens. The past track record of community gardens as a catalyst for urban revitalization proves the value and legitimacy of community gardens as an urban land use.

One of the best examples of community gardening as a means to urban revitalization is the Dudley Street Neighborhood Initiative in Boston, Massachusetts. In 1984, the residents of the Roxbury-Dorchester neighborhood in Boston formed the Dudley Street Neighborhood Initiative (DSNI) in order to reclaim their community from the 1300 vacant lots that had become the dumping ground for commercial and industrial waste. To date, DSNI is the only community-based nonprofit organization in the United States to be granted the power of eminent domain by local authorities. Eminent domain gives DSNI the ability to gain ownership and control of

![FIGURE 2. Community members at a garden site in Boston (Credit: The Food Project)](image)
privately owned land in order for it to be used as a part of their plan for urban regeneration. A key part of this plan for urban regeneration is community gardening. DSNI has already been successful in securing funding, through the Massachusetts Highway Department Supplemental Environmental Project, for the soil remediation of the sites to be used as community gardens. DSNI hopes that within a decade, community gardens will transform the blighted, economically distressed Roxbury-Dorchester neighborhood into a thriving urban center, where residents and local businesses contribute directly to the local economy and serve as stewards of the environment (Shutkin 2000).
COMMUNITY GARDENS IN THE UNITED STATES

During times of economic recession and food shortages during the first half of the 20th century, community gardens flourished throughout the United States, enjoying considerable government support at both the national and local levels. In addition, during the second half of the 20th century, community gardens played a significant role in the revitalization of inner-cities, with local governments supporting the efforts of local citizens to reclaim their neighborhoods from urban blight. Despite this long history of community gardening in the United States, today the increased demand for central city land and subsequent development pressures threaten the very existence of community gardens throughout the country. These community assets have little protection and little recourse. In fact, land use planners and government officials in the United States have relatively little to no experience in ensuring the preservation of community gardens through land use policies and planning. Two main strategies that relevant authorities could use to ensure the preservation of community gardens in the United States is the identification of community gardens in local land use plans and open space plans and the designation of a government agency or department responsible for overseeing community gardening activities throughout a city.

This section on community gardens in the United States briefly traces the history of community gardens in the United States and describes the present-day fight for urban land for community gardens, using New York City as the primary example and some experiences from other cities as well. Since the purpose of this project is to propose strategies for incorporating community gardens into urban land use policy and planning, the following section describes how other cities—namely Chicago and Seattle—have better integrated community gardens into land use policy and planning through open space planning and creating agencies responsible for the day-to-day management and long-term preservation of community gardens.

History of Community Gardens in the United States

The history of community gardens in the United States dates back to the late 19th century, when in the wake of a severe economic depression, the mayor of Detroit created the first urban gardens in 1894. In order to ensure food security and supplement the income of residents, the city gave 945 families garden plots totaling 455 acres to grow their own fruit and vegetables (Goodman 2000). Although other major cities followed Detroit’s lead and created urban garden relief programs, these programs were rather short-lived since government support of the programs tended to wane as the economic necessity of the gardens diminished during more prosperous economic periods. Indeed, since community gardens first came on the scene, the existence of the gardens has largely depended on government support at both the local and national levels during times of economic necessity.

Liberty, Victory, and Relief Gardens

Community gardens became at the forefront of national policy during the First and Second World Wars. During the First World War, the National War Garden Commission was established and called upon citizens of the United States to “plant for freedom” and “hoe for liberty”. The need to supplement American food production in the face of severe shortages gave rise to the “liberty gardens” throughout the country during this period; however, again as the economic need for the gardens diminished in the post-war years, the liberty gardens began to disappear, displaced by more lucrative land uses.

The American government again promoted community gardening as a major part of the war effort during the Second World War by creating the National Victory Garden Program, which used community gardens, backyards, city parks, and even town commons to supplement food production in the United
States. The specific goals of the program were to: 1) ease the demand on commercial supplies of produce, making them more available to armed forces; 2) reduce the demand on metals used in canning; 3) free up railroads for munitions transport; 4) maintain vitality and morale of Americans on the homefront; and 5) preserve food for winter use. In 1944, 20 million victory gardens yielded 42% of the vegetables consumed in the United States (Goodman 2000). In addition to the liberty gardens and victory gardens, relief gardens were also established during the first half of the 20th century during the Great Depression of the 1930s. However, by the beginning of the 1950s many of the liberty, victory, and relief gardens were no longer a part of the urban landscape—as economic depressions and food shortages became history, so did the gardens.

Neighborhood Reclamation

The community garden movement made a major revival on the urban scene in the last half of the 20th century. During this period, the concomitant processes of deindustrialization and suburbanization led to a dramatic decrease in urban populations and, consequently, led to the abandonment of residential, commercial, and manufacturing structures in older cities, particularly inner-cities. These lands, taken over by city governments as abandoned, tax-delinquent properties, placed excessive administrative burdens on municipal governments, caused losses in revenue when they were taken off the local property tax roll, and, most importantly, posed various threats to their local communities. Since the 1970s, grassroots organizations throughout the United States have viewed these contaminated sites as potential community assets, converting them into safe and productive uses as community gardens. Although most of these community gardens still have an economic objective, the gardens have become more about neighborhood reclamation, public health, and a desire to see green space in the urban environment.

Today there are an estimated 6,020 community gardens throughout the United States accounting for 2 million community gardeners (Goodman 2000).

The Plight of Community Gardens: The Case of New York City

In order to fully understand the present-day situation of community gardens in many cities throughout the United States, perhaps it will prove beneficial take a closer look at the case of New York City, which typifies the plight of community gardens, in the face of restrictive local policies that clearly disregard the benefits community gardens bring to urban environments.

The modern garden movement in New York City started in 1973 when a grassroots organization calling themselves the Green Guerrillas were legally allowed to build a garden on the corner of Bowery and Houston streets in the Lower East Side. In a time of economic crisis and severe neighborhood blight, it was in the city’s best interest to support such volunteer initiatives aimed at neighborhood reclamation. As a result of initiatives by local citizens and partnerships among gardeners, the city government, and private organizations, community gardens quickly became the pride of the neighborhoods, as well as desperately needed open spaces. Over a 25-year time span, community gardens flourished in New York City, occupying vacant and abandoned lands and enjoying a long and undisturbed tenure.

The city responded to the popularity of the community gardens and established Green Thumb in 1978, a municipal agency through the Parks and Recreation Department that administered a garden leasing
program in which the city granted year-long leases to community gardeners and provided other assistance to the gardeners. However, in hindsight, these leases had no legal standing as the city could revoke the lease with a month’s notification, which is exactly what has happened over the last three years. In 1998 the Department of Housing, Preservation, and Development took over control of the administration of Green Thumb from the Parks and Recreation Department, signaling the imminent demise of the community gardens. The Department of Housing, Preservation, and Development, maintaining that the gardens were always viewed by the municipality as a temporary use, is holding onto 450 of the Green Thumb gardens for future housing redevelopment, and is in the process of auctioning the remaining 300 sites on which community gardens are currently located.

The now close to 750 community gardens throughout New York City face impending extinction as a result of Mayor Giuliani’s efforts to privatize city owned land without consideration of how important the gardens are to the fabric of neighborhoods and quality of life. In the Spring of 1997, the first sign of the imminent bulldozing of community gardens came in a lead article of the New York Times which reported the city’s policy to sell off the city-owned lands on which community gardens were leased by local groups. In late 1998, Giuliani put 114 gardens on the auction block, estimating that the sales would bring in $3 million. Clearly, selling off gardens will not significantly ease the city budget, nor will it significantly increase tax returns—in fact, a report published in 1999 by Brooklyn Borough President Howard Golden showed that 90 percent of the lots auctioned by the city from 1991-95 remain vacant.

In response to the auctioning of the 114 gardens, enraged gardeners mobilized and raised enough money to purchase the properties—the Trust for Public Land purchased 63 gardens for $3 million and the New York Restoration Project fronted $1.25 million for the remaining 51 endangered gardens. During that same period, considerable political pressure caused the Department of Housing, Preservation, and Development to work with the Parks and Recreation Department and the community boards to officially designate 36 of the community gardens as permanent parks. Nonetheless, the fight continues. In April of 2000, Giuliani announced that 137 city-owned properties would be developed for market rate housing. In a city of over 11,000 truly vacant lots, 40 of the proposed 137 lots are established community gardens.

Although the New York State Open Space Plan of 1997 clearly embraces community gardens in New York City, identifying that the preservation of community gardens would provide equity for urban populations chronically and severely underserved by open space, city policies clearly view community gardens as dispensable. In the auctioning of the Green Thumb gardens, city officials bypassed normal city processes, which allow for community planning boards to have an opportunity to comment on proposed land use changes and requires environmental review of any proposed change of land use. Since the community gardens are designated as “vacant” plots, and public comment and environmental review procedures only apply to changes to an existing land use, the gardeners were effectively denied due process. As a result, community gardens throughout New York City will be developed with no public discourse, no planning for open space needs, and no requirement for truly vacant lands to be developed first. The sale of the community gardens might raise short-term revenues, but the subsequent development will be at the expense of the profound contribution to quality of life that community gardens provide.

Although this section on the fight for urban land in many cities in the United States for community gardens has focused on New York City, it has thus far focused only on experiences in New York City since the plight of community gardens there is the most well-documented. However, many cities across the United States face similar threats with respect to official government support and inclusion in the local land use planning process. For example, over the last few years more than 5 acres of community gardens in Philadelphia have been developed for other uses, and community gardens in Madison, Wisconsin, continue to compete for urban land with other uses, with 60 percent of existing community gardens in Madison in imminent danger of being converted into other land uses. More specifically, in the case of
Madison, the city has lost 12 garden sites over the last 10 years, which account for nearly 400 individual garden plots or 40 percent of Madison’s total community garden plots (City of Madison Advisory Committee on Community Gardens 1999).

**Strategies for Integrating Community Gardens into Land Use Policy and Planning**

The New York City case study and related examples depict many of the impediments that community gardens face across the United States—these impediments include land-related issues such as availability and tenure, restrictive policies that fail to designate community gardens in land use plans and zoning maps, and unsupportive government authorities that would rather attract more lucrative land uses to community garden sites. However, although unsupportive local authorities and restrictive policies have been the thorn in the side of the community gardens in many cities in the United States, government officials and local land use planners in many other cities throughout the United States are committed to the cause of community gardens, designating staff time and resources to ensure the preservation and expansion of community gardening programs. The remaining part of this section will present some of the strategies other cities across the United States—namely Chicago and Seattle—have used to support and even encourage community gardens as an urban land use.

**Open Space Planning: The Case of Chicago**

The formulation of municipal open space plans that identify resources, prioritize lands for community gardens, and develop relevant implementation and monitoring measures helps ensure the preservation and creation of community gardens.

In the case of Chicago, in 1993 the City of Chicago initiated a major program to improve the quality of life for Chicagoans with the development of the CitySpace Program through the City’s Department of Planning and Development. CitySpace is an umbrella program that coordinates numerous open space initiatives throughout the city, targeting open space improvements in the neighborhoods with the greatest need. The CitySpace Plan, released in 1995, establishes the goal of adding 1,300 acres of new open space in 10 years, and offers a long-range comprehensive plan for creating new community gardens in Chicago.

In 1996, NeighborSpace, a partnership between the Department of Planning and Development, the Chicago Park District, and the Cook County Forest Preserve District, was established to ensure the implementation of the CitySpace Program. These three public agencies have signed an intergovernmental agreement for a 20-year period committing each partner to $100,000 a year to acquire title to vacant city-owned and tax-delinquent lands identified in the CitySpace Plan, deed the land to community organizations for gardening purposes, and provide funding for insurance. The organization was successful in acquiring 24 sites for community gardens in 1999.

It is clear from experiences in Chicago that city-wide open space plans and associated implementation strategies, coupled with local government support and leadership, are essential to the preservation and expansion of community gardening activities throughout a city.

**Institutional Support: The Case of Seattle**

In addition to open space plans that identify potential community garden sites and set forth implementation measures to secure those sites, it is equally important to the preservation and creation of community gardens to have a government department or agency to oversee gardening activities throughout a city. The government department or agency could be responsible for identifying, prioritizing, and acquiring resources for community gardens, financing projects through credits and loans,
providing technical resources and training, enforcing policies and providing incentives, and monitoring the program.

In the case of Seattle, in 1973 the City of Seattle established the P-Patch Program, a community gardening program, as a part of the City’s Department of Neighborhoods. The P-Patch Program is an innovative program in that it seeks to ensure not only the preservation of existing community gardens but also the future expansion of community gardening programs throughout the city. The main objective of the P-Patch Program is to improve community-building, environmental stewardship, economic opportunity, and social equity through urban gardening. To date, the P-Patch Program, in conjunction with a not-for-profit organization called Friends of P-Patch, provides community garden space for residents of 44 neighborhoods throughout Seattle, managing over 1,900 garden plots on 12 acres of land that serve more than 4,600 urban gardeners.

An integral part of the P-Patch Program is the Cultivating Communities Program, co-sponsored by the Friends of P-Patch and the Seattle Housing Authority. The Cultivating Communities Program has built 11 community gardens in public housing communities of which 3 are income-generating gardens. These market gardens provide about $500 dollars in supplemental income per year to the growers, who are mostly recent immigrants from Eritrea, Ethiopia, Cambodia, Somalia, Laos and Vietnam.

In 1999/2000, the P-Patch Program formulated a 5-year plan to ensure the preservation of existing gardens and the expansion of Seattle’s community gardening program in the future. The 5-year plan seeks to protect existing community gardens by calling for the acquisition of the community gardens that are currently located on privately held land vulnerable to development pressures—about one third of the community gardens in Seattle fall into this category. Recognizing that there just simply is not enough available undeveloped land in the city to accommodate the additional 15 to 20 gardens sites needed over the next five years, the plan also targets public projects such as public utility sites, public housing communities, and parks to include space for community gardens. More specifically, the plan calls for the following measures: an inventory of surplus city land holdings suitable for community gardens, the designation of city-owned lands in the highest-density areas for use as community gardens, and the establishment of a capital fund to help acquire leased p-patch sites and acquire new sites for community gardens.

Even though the Comprehensive Plan of the City of Seattle clearly supports the P-Patch Program, stating that there should be one dedicated community garden for each 2,500 households in the some 20 urban villages in Seattle and that the city should use city-owned surplus property for community gardens, the 5-year plan states the need for formal city policies that give high priority to use of public land for community gardens. The 5-year plan was adopted as a resolution by the city council and the mayor; although the plan legally lacks teeth, the formulation and the subsequent adoption of the plan does demonstrate the broad public support for community gardening in Seattle. This public support is essential in ensuring that land use planners in Seattle adequately include community gardens in the land use planning process.

Seattle’s P-Patch Program is a model example of how strong partnerships between grassroots organizations, relevant government agencies, and local land use planners can be effective in implementing successful urban gardening programs.

Outlook for Community Gardens in the United States

Community gardens across the United States clearly need better protection through the local land use planning process, as the New York City case study and related examples demonstrate. Although such cities as Chicago have formulated open space plans that identify both existing and potential garden sites
and set forth implementation measures to protect existing gardens and acquire gardens in the future, community gardens have been largely ignored in the local land use planning process throughout many cities in the United States. The failure to appropriately designate community gardens as an existing land use has perpetuated the commonly held notion that community gardens are dispensable. To ensure the preservation of community gardens, the gardens need to be designated as such in local land use plans and zoning maps. In so doing, the community gardens will enjoy greater land security, since land use plans and, particularly, zoning maps are fairly complex to change. Moreover, should there be any proposed change to a community garden site, the interests of the gardeners would be taken into account through a public review process.

While it is clear from experiences in Chicago and Seattle that city-wide open space plans and local government support and leadership are essential to the preservation and creation of community gardens throughout a city, community gardeners cannot rely solely on the belief that someday government officials and local land use planners will realize the inherent value of community gardens. Community gardeners across the United States must politically organize and demand that local land use planners and government officials account for their interests in the land use planning process. In the United States, community gardening remains a distinctively local issue. Although the American Community Gardening Association, created in 1979, has spearheaded the community gardening movement at the national level, the political power of this organization is still fairly weak, with only 900 of the estimated 6,000 community gardens in the United States members of the national association. Clearly, there is an opportunity for community gardeners throughout the United States to better organize beyond the local level and demand that community gardening be placed not only on local land use planning agendas, but the national agenda as well.
COMMUNITY GARDENS IN GERMANY
A Case Study of Berlin

Land use planners across the world seeking to discover ways in which community gardens can be integrated into urban land use policy and planning have looked to Germany, as the community gardening movement was really first born there during the 19th century. Since there are differences in the planning processes between Germany and the United States, in addition to apparent cultural and socio-economic differences between the two countries, any comparison between the two countries is slightly tenuous. For example, the social security system in Germany is so highly advanced that urban dwellers in Germany no longer have a need to cultivate community gardens for food security purposes—as a result, community gardens in Germany now serve primarily a recreational function, whereas community gardens in the United States still have the primary functions of ensuring food security and improving environmental conditions in urban communities. Moreover, the planning process in Germany is less market-driven in Germany as compared to the United States, with local government officials having a greater degree of control over the dispensation of land and use of land, to ensure that urban development is in accordance with municipal and state interests. Nevertheless, the community gardening movement in the United States could clearly learn from both the achievements of the community gardeners in Germany with regard to political activism and the challenges community gardens in Germany have faced with respect to recognition in official land use plans over the years.

The first part of this section on community gardens in Germany briefly traces the history of community gardens in Germany, from their initial objectives of food security and environmental improvement to their present-day recreational use. The following part discusses ways in which community gardens are protected in Germany through federal legislation and local land use planning. The next part details the institutional climate of community gardening in Germany, focusing on the vital role gardening associations plan in ensuring the long-term security of community gardens. Throughout this discussion of community gardening in Germany, the city of Berlin is used as a case study.

History of Community Gardens in Germany

The history of community gardens in Germany dates back to the beginning of the 19th century. The concomitant processes of industrialization and urbanization during this period resulted in a decline of living standards, including overcrowded conditions, poverty, and malnutrition, in cities throughout Germany and, indeed, the industrialized world. To combat these social ills, factory owners in a number of industrializing cities in Germany leased out small plots of land to workers so that they could grow their own fruit and vegetables. For example, it was during this period that the state-owned railway company began to lease small strips of land adjacent to railway tracks to workers to supplement their income by growing their own fruit and vegetables. The railway plots still total about 67,000 throughout Germany, with close to 5,000 plots located in Berlin (Bundesministerium fur Raumordnung, Bauwesen, und Stadtebau 1998). In addition to the purpose of food security, the small pockets of green throughout the cities contributed to an overall improved environmental quality in what were otherwise rather abysmal, unsanitary and, at times, even noxious working and living environments.

By the late 19th century, gardeners in Germany were already beginning to organize in associations to collectively represent the interests of the gardeners, with the first organized garden association forming in Leipzig in 1864. The name of the Leipzig association—Schreberverein—is named after Daniel Gottlieb Moritz Schreber, who was the head of the orthopedic clinic at Leipzig and is commonly considered the first organizer of the garden movement in Germany, as he demanded open space for children in cities in order for them to play and improve their physical health (Groening 1996). To this day, gardens throughout Germany are still called schrebergarten, but are more commonly referred to as kleingarten,
small gardens, since these gardens are individual garden plots, typically around 350 square meters, that comprise larger garden colonies or communities managed by local associations.

During the First and Second World Wars, the kleingarten gained in importance, as food shortages throughout Germany forced people to grow their own fruit and vegetables. Recognizing the integral function the allotments served in ensuring food security and providing shelter—small houses on the allotments served as makeshift housing for people whose residences suffered damage from bombing—the national government passed various emergency decrees during wartime to preserve the gardens and keep the rents down (Theobold 1997). Moreover, following the First World War, the adoption of the Federal Allotment Garden Act in 1919 further institutionalized national support of the community gardens.

As a result of today’s more prosperous economic conditions, more stable political climate, and the highly advanced social security system in Germany, people no longer need allotment gardens for food security and improved nutrition. The kleingartens now serve more of an aesthetic and recreational function for city-dwellers who seek both access to green space in their immediate environment and a place where people can join in social gatherings.

Today there are over 1,300,000 individual allotment gardens throughout Germany that are leased from municipal governments to grow fruit and vegetables and for recreational purposes (Bundesministerium fur Raumordnung, Bauwesen, und Stadtebau 1998). These over 1,300,000 gardens account for 46,640 hectares (115,201 acres) of land throughout Germany (Groening 2000). On a more micro-level, there are currently over 80,000 individual allotment gardens in Berlin—with an estimated 3,250,000 inhabitants, there is approximately one allotment garden to every 40 inhabitants. And with over 3,000 hectares (7,410 acres) of gardens throughout Berlin, the allotments currently account for nearly four percent of the total land area of Berlin (meeting with Juergen Hurt, 14 March 2001).

Policy Framework

Germany is rather unique with respect to the integration of community gardens into land use policy and planning since it is one of the only countries throughout the world to have enacted legislation at the federal level in support of community gardens—the Federal Allotment Garden Act. Although similar laws have been passed in Austria and Japan, in most countries community gardening remains a distinctively local issue. Indeed, there are also efforts at the local level in Germany to ensure the long-term preservation of the community gardens through local land use planning.

The Federal Allotment Garden Act

The Federal Allotment Garden Act of 1919, passed during the Weimar Republic (1919-1933), institutionalized national support of the allotment garden movement. The Act was a direct result of considerable political pressure from both the bourgeois and the proletariat following the First World War, who together demanded state protection in light of the need to grow vegetables for themselves during the ensuing food shortages of the post war years (conversation with Gert Groening, 14 March 2001). The Act set forth regulations to preserve allotments by both ensuring long-term leases between the local authorities and garden associations and demanding local authorities to provide new land for the allotments should they need to take away garden sites for a public purpose such as new housing, commercial space, or infrastructure projects. Moreover, the federal law kept leasehold prices low by ruling that the rent for allotment gardens must be equivalent to local agricultural use, rather than determining the value based on the specific location of the garden and the potential use of the site (Groening 2000).

Since its initial adoption in 1919, the Federal Allotment Garden Act has been amended on several occasions to make sure that the regulations reflect present needs and opportunities. Although many of the
main policy measures have remained unchanged, the 1983 amendments to the law allow the ground rent for allotment gardens to be assessed based on the location of the site; however, the rent must not exceed four times the rent of agricultural land (Groening 2000). This amendment to the law is mostly due to the changing functions of the allotment gardens—that is, the gardens no longer serve strictly a horticultural function, but rather are primarily for recreational purposes.

Local Land Use Planning

The German planning system was first outlined in the federal law for building in 1960 (Groening 2000). In this legislation, local land use planning was established as a two-tier system, with a master land use plan, known as a “preparatory plan”, which depicts how the city intends to use its land over a time span of 15 to 20 years, and a series of local development plans, also known as “obligatory plans”, which further detail the permissible land uses in various distinct areas throughout the city (conversation with Gert Groening, 14 March 2001).

More specifically, the master land use plan shows in general terms the proposed distribution of land uses throughout the city and, in so doing, provides the framework for the more spatially detailed obligatory plans. However, the master plan is principally used by public offices to guide them in decision-making and is legally binding only for those public bodies, not for individual citizens. On the other hand, the local development plans are referred to as obligatory plans because they are legally binding for both public bodies and private entities and, thus, provide the legal basis for law suits (Groening 2000).

The obligatory plans never cover the entire area of the city; rather they are on a more micro-scale, usually covering just a few city-blocks. Moreover, although there are about 2,000 obligatory plans for Berlin, not all of the land within the city is included in an obligatory plan—in general, obligatory plans are only developed when there is considerable political pressure on the part of a developer who wants security before proceeding with a project. While the preparatory plan is relatively flexible and easy to change, since it lacks a high degree of spatial specificity, there is a fairly complex procedure for making changes to obligatory plans that includes a public review process and approval by the city council.

With respect to the community gardens, the most recent preparatory land use plan for Berlin (Flachennutzungsplan Berlin 1994), which was the first preparatory plan since the reunification of West Berlin and East Berlin in 1989/1990, became effective 1 July 1994 and designated 85 percent of the allotment gardens as such. A political agreement was reached regarding the remaining 15 percent, which were not included in this plan, that allows the gardens to be used for another 10 years before they will be converted to other land uses. The senator for city development and environmental protection at the time warned that the 10-year reprieve should not be viewed as a postponement of a decision, but rather should be used by the affected allotment holders as a transition period to make necessary arrangements in other garden colonies (Groening 2000).

Many people within the gardening community in Berlin believe that although some of the gardens are designated in the master plan for other uses such as flats, industrial estates, communication centers, and infrastructure projects, the gardens are fairly secure for the time being since the development pressures of the early 1990s, which followed the reunification of East and West Berlin, are finally beginning to diminish (conversation with Juergen Hurt, 14 March 2001). However, another boom may be on the horizon—the city has become more economically attractive as a result of fairly recent political and economic developments in Eastern Europe, with such countries as Poland and Ukraine looking toward Berlin (conversation with Gert Groening, 14 March 2001). In addition, the decision to make Berlin the German capital again will undoubtedly accelerate development within the city, with the relocation of government offices to Berlin having many multiplier effects (Flachennutzungsplan Berlin 1994).
Clearly, in light of these impending pressures, the allotment gardens must be legally protected through the planning process. Although 85 percent of the gardens are included in the master plan, the obligatory land use plans are really the only chance to secure garden plots as permanent allotment gardens, or “duerkerkleingarten” (Groening 2000). Given the complex procedures for making changes to these obligatory plans, community gardens that become part of an obligatory plan are harder to terminate than those that are designated only in the master plan or, even worse, the gardens that are targeted for future development in the master plan. Currently, only 6 percent of the community gardens in Berlin are secured in obligatory land use plans and, as a result of this designation, have relatively permanent land tenure (conversation with Gert Groening, 14 March 2001).

The fact that the land tenure of 94 percent of the community gardens can be considered tenuous is particularly problematic in light of the lack of available center city land in Berlin for the relocation of gardens. That is, even though the Federal Allotment Garden Act demands that local authorities provide land for the relocation of gardens, there are few regulations as to where this new land is to be located. Since there is a shortage of both available land in city center locations due to development pressures and suitable center city land due to extensive soil contamination caused by heavy bombing during the First and Second World Wars, often land for relocation is further away from the city center and, therefore, less accessible to the people who actually use the gardens (conversation with Juergen Hurt, 14 March 2001).

Institutional Climate

There are both non-profit associations and government agencies responsible for the oversight of community gardens in Germany. The garden associations throughout Germany are organized on various different levels including that of the garden community, borough, municipality, state, and nation. Together these associations play an integral part in the preservation of community gardens in Germany in that they represent the collective voice of the allotment holders and express their needs to the respective levels of government. There are also government agencies on both the local and state levels responsible for the oversight of the allotment gardens; however, these agencies play a limited role in the day-to-day management of the garden communities and in ensuring the long-term security of the gardens.

Garden Associations

The smallest scale on which community gardens are organized in Germany is the local level. More specifically, local gardening associations rent land from the municipal government for a gardening colony or community, subdivide that land into individual plots to lease to allotment holders, collect rent from the allotment holders, organize change of leaseholder, and maintain common areas of the garden colony. Throughout Germany there are over 15,000 of these local associations, and in the case of Berlin, there are currently over 800 local associations (Groening 2000).

The 800 local associations in Berlin are organized within 18 borough-unions. Until recently, Berlin was divided into 23 boroughs or districts; however, due to the lack of money in Berlin, there was a need to reduce the number of administrative positions in Berlin, thus, leading to the consolidation of the 23 boroughs into 12 boroughs (correspondence with Gert Groening, 22 March 2001). However, there are 18 borough-unions for allotment gardens in Berlin because prior to the reduction from 23 to 12 districts, there were not gardens in all of the 23 districts—in fact, the gardens are not uniformly distributed throughout the city, with very few, if any, gardens in the inner city, as many as 17,000 gardens in one district, and as few as 1,000 gardens in another (conversation with Juergen Hurt, 14 March 2001). There is currently a push to consolidate the 18 borough-unions into 12 in order to correspond with the present administrative and planning districts. The 18 borough-unions serve an intermediary function between the individual gardeners and the local associations and the relevant government agencies. It is through the
Since Berlin is both a municipality and a state, the 18 borough-unions in Berlin combine to form the state union “Landesverband Berlin der Gartenfreunde”. The state union represents the interests of gardeners on the state level by communicating general aspects of allotment gardening policy to the borough unions, local associations, and individual members, and by consulting in the establishment of general rules for the design, leasing, and the administration of the gardens (Groening 2000). For example, the main tool the state union uses to effectively express the needs of the allotment holders and communicate current issues pertaining to allotment gardening to all of the 80,000 gardeners is the monthly journal “Berliner Gartenfreunde”. The journal serves an integral function in the political activities of the allotment gardeners—in the past, the journal has published the names of all of the members of the Berlin House of Deputies, their respective party affiliation, and how they have voted on garden issues, and published answers by each political party to questions relating directly to the preservation of allotment gardens. In addition, the journal has both called for the allotment holders to visit their deputies in their public office hours to ensure that the interests of the gardeners are heard by local decision-makers and published letters of protest against local policies such as land use plans that have largely disregarded the expressed needs of the allotment gardeners (Groening 2000).

“Landesverband Berlin der Gartenfreunde” and the 18 other state unions throughout Germany constitute the federal union of allotment holders, “Bundesverband Deutscher Gartenfreunde”. It is estimated that the federal union represents the interests of 4,000,000 people in Germany (Groening 2000). Moreover, “Bundesverband Deutscher Gartenfreunde”, together with federal unions in France and Poland, was one of the co-founders of the “Office International du Coin de Terre et des Jardins Familiaux” in 1921 (conversation with Juergen Hurt, 14 March 2001). This international organization of allotment gardeners now has 14 federal unions as members—Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Luxembourg, the Netherlands, Norway, Poland, Slovakia, Sweden, and Switzerland—and lobbies the European Parliament for garden preservation on behalf of all of these nations. Figure 4 gives a clearer picture of how all of these garden associations are structured in a hierarchical order on the local, national, and international levels.

FIGURE 4. Hierarchy of Garden Associations in Germany on Municipal, National, and International Levels

<table>
<thead>
<tr>
<th>Berlin</th>
<th>Germany</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-Union</td>
<td>Federal-Union</td>
<td>International Organization</td>
</tr>
<tr>
<td>18 borough-unions</td>
<td>19 state unions</td>
<td>14 federal-unions</td>
</tr>
<tr>
<td>800 local associations</td>
<td>15,000 local associations</td>
<td></td>
</tr>
<tr>
<td>80,000 allotment holders</td>
<td>1,000,000 allotment holders</td>
<td></td>
</tr>
</tbody>
</table>
**Responsible Government Agencies**

There are agencies within both the borough and the state government that oversee the allotment gardens in Berlin. More specifically, each of the 12 boroughs of Berlin has a position for the administration of the allotment gardens in the parks department. These parks departments can be thought of as the landlords of the local garden associations. Moreover, there is an administrative position on the state-level within the department for landscape and open space planning, a part of the state administration for city development and environmental protection (Groening 2000). In addition to these local and state-level positions, many other departments are involved in community gardening matters including planning departments and real estate departments, among others.

Although the federal government clearly supports the community gardening movement in Germany through the Federal Allotment Garden Act and there are government agencies on both the state and local levels that are responsible for the oversight of the gardens, the preservation of the allotment gardens throughout Germany Berlin is far less attributable to supportive and even encouraging local and federal governments than it is to the various gardening associations. That is, these associations present a united front and a formidable political force on the local, state, federal and even international levels that government officials and land use planners can simply not afford to ignore.

**Outlook for Community Gardens in Germany**

Community gardens are a mainstay on the urban scene in Germany, and particularly in Berlin, as a result of just how well the community gardeners are organized. Indeed, in Germany the community gardens are deeply entrenched in the political climate—gardening associations on the neighborhood, municipal, state, and federal levels have been around for over 100 years. What is so surprising in Germany is that despite the political clout of the gardening organizations, so few of the gardens are actually protected through the land use process. Clearly, garden associations at all levels must continue in their fight to get more of the existing community gardens secured in obligatory land use plans.
COMMUNITY GARDENS IN THE NETHERLANDS
Case Studies of Rotterdam and Amsterdam

Like Germany, community gardens have a long history in the Netherlands, with the gardens initially serving food security purposes in the 19th century and having the primary functions today of providing both necessary green space in urban environments and a social forum for people to recreate. Again, there are surely cultural and socio-economic differences between the Netherlands and the United States; nonetheless, looking at the community gardening movement in the Netherlands could provide valuable lessons for both gardeners and land use planners in the United States. Of particular interest is the significant role community gardens play in the national compact city planning strategy.

The first part of this section on community gardens in the Netherlands briefly traces the history of community gardens in the Netherlands. The following part discusses how community gardeners in both Amsterdam and Rotterdam acquire land for gardening and describes the challenges the gardeners face in securing land tenure. In the remaining parts of this section, the policy framework and institutional climate of community gardening in the Netherlands are further elaborated.

History of Community Gardens in the Netherlands

The history of community gardens in the Netherlands largely mimics that of Germany, since the Dutch largely copied the idea from the Germans during the period of rapid industrialization and urbanization in the late 19th century. As was the case in Germany, during this period factory owners gave workers individual plots of land to grow their own vegetables for food security purposes and to contribute to an improved environmental quality in the industrialized cities. In addition to these objectives of the allotment gardens, factory owners, holding socialist beliefs, also thought that by providing these lands to the industrial workers, productivity would increase since “working the land” would increase morale (conversation with Jan Dekker, 23 January 2001). During the food shortages following the First and Second World Wars the allotments in the Netherlands served a critical function in ensuring an adequate food supply throughout the country.

The more contemporary uses of the volkstuinen, or people’s gardens, in the Netherlands are recreation, as small houses are permitted to be built on a majority of the gardens for summer homes. Growing fruit and vegetables for personal consumption is another primary function of the gardens in the Netherlands. Income generation is typically not an objective of the community gardens in the Netherlands since the Common Agriculture Policy of the European Union sets forth onerous restrictions which limit the ability to sell produce grown on an allotment garden to the general market (conversation with Yvonne Hitzert, 22 February 2001). Moreover, although the social security system in the Netherlands is so highly advanced that allotment holders do not need to grow their own fruit and vegetables to supplement their income, allotments in the Netherlands are often times rented by recent immigrants to the country, especially from Surinam, Turkey and Morocco, who grow produce native to their homeland (correspondence with Herman Vroklage, 2 March 2001). In the past, allotment gardens in the Netherlands have been primarily tended by the elderly in search of an active lifestyle; however, in recent years the allotments are appealing to younger individuals and families as well. For example, in Amsterdam, 39% of the allotment leaseholders were between the ages of 21-50, 46% were between the ages of 51-70, and 15% were between the ages of 71-95 (Bond van Volkstuinders 1997).

To date, there are approximately 240,000 allotment gardens in the Netherlands (correspondence with Herman Vroklage, 2 March 2001). On a more micro-scale, there are currently 5,300 individual garden plots, on approximately 132 hectares (326 acres) of land, which comprise 43 gardening communities throughout the city of Rotterdam (conversation with Yvonne Hitzert, 22 February 2001). With close to
590,000 residents, there is 1 garden per approximately every 110 people in city of Rotterdam. In addition to these 5,300 plots organized under the local community gardening association, Rotterdamse bond van Volkstuinders, there are 50 garden plots in the city of Rotterdam owned by the national railway company, which has historically rented land adjacent to railway tracks to employees and other community members (correspondence with Lisa Neve, 21 March 2001). Moreover, there are 21 educational gardens run by the Sports and Recreation Department of the city of Rotterdam, located on approximately 10 hectares (24.7 acres) of land in the city (correspondence with Gerard Reitsma, 13 March 2001). As for Amsterdam, there are 5,995 individual garden plots, on 280 hectares (692 acres) of land, which comprise 29 gardening communities throughout the city (Bond van Volkstuinders 1997). With a population of 730,000 residents, there is 1 garden per approximately every 120 people in the city of Amsterdam. In addition to the close to 6,000 allotments organized by the local gardening association, Bond van Volkstuinders, there are 8 other gardening communities in the city that are independently managed (conversation with Andre Rodenburg, 21 March 2001). Figure 5 juxtaposes some of these important statistics on the community gardens organized by local gardening associations in Amsterdam and Rotterdam.

**FIGURE 5. Community Gardening Statistics in Amsterdam and Rotterdam**

<table>
<thead>
<tr>
<th>Statistic</th>
<th>AMSTERDAM</th>
<th>ROTTERDAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>730,000</td>
<td>590,000</td>
</tr>
<tr>
<td>Number of Garden Plots</td>
<td>5,995</td>
<td>5,300</td>
</tr>
<tr>
<td>Inhabitants:Garden Plot</td>
<td>120:1</td>
<td>110:1</td>
</tr>
<tr>
<td>Number of Garden Communities</td>
<td>29</td>
<td>43</td>
</tr>
<tr>
<td>Average size of plot</td>
<td>350 square meters</td>
<td>250 square meters</td>
</tr>
<tr>
<td>Total area of gardens</td>
<td>280 hectares</td>
<td>132 hectares</td>
</tr>
<tr>
<td>Length of Contract</td>
<td>1 year</td>
<td>10 years</td>
</tr>
<tr>
<td>Notice of Termination</td>
<td>1 month</td>
<td>6 months</td>
</tr>
</tbody>
</table>

**Land Acquisition and Tenure**

As in Germany, land for community gardens is typically rented from local authorities by a gardening association, who is then responsible for subdividing the land and renting plots to individual allotment holders. In the case of Rotterdam, the lease between the local association, Rotterdamse bond van Volkstuinders (RBVV), and the municipality typically runs for 10 years with an automatic renewal; however, the lease states that the municipality can terminate the lease with 6 months notice should the local authorities need the land for a public purpose. In the past, gardens in Rotterdam have been lost to housing, high-speed train line, office buildings, and even a park. Although gardens have been terminated in many cases, the destruction of the gardens has never been as quick as the permissible 6 months since RBVV enters into negotiations that generally last 2-3 years with the municipality to get new land for gardens and to compensate the gardeners for the value of their property and the emotional damage. For example, RBVV is currently negotiating with the municipal government over the loss of a garden community for 165 families in the southern part of the city; the association expects to receive 10 to 15 million guilders (4 to 6.25 million dollars) in compensation, in addition to accessibility to new land (conversation with Yvonne Hitzert, 22 February 2001).

As for the community gardens in Amsterdam, all of the sites organized by the local gardening association, Amsterdam bond van Volkstuinders (ABVV), have at least a one-year contract with the local authorities, and a few of the sites have 5-year leases. The length of the lease is largely dependent on which of the 16 districts of Amsterdam the garden is located, since ABVV enters into leases with the district governments, rather than the municipal government. In all of the contracts the local authority has the right to terminate the contract with one-month notice, so the longer-term leases really do not translate into long-term land security. The termination of leases happens quite often in Amsterdam; however the
process usually takes longer than the permissible 1 month, since ABVV enters negotiations with the
district and municipal authorities, which usually take 2-3 years. In the past, the majority of terminated
gardens have been lost to infrastructure investments in roads and railway lines (conversation with Andre
Rodenburg, 21 March 2001).

For the last 30 years community gardens in Amsterdam have been considered a “permanent use” by the
municipality. However, this designation is quite misleading. That is, this designation does not
necessarily mean that the gardens in a specific location cannot be terminated, it just means that upon
termination the responsible government authority has to provide monetary compensation and new land for
the relocation of the gardens. Typically this land is located further from the city center, and in some cases
is less than the amount of land previously occupied. Therefore, in relocating gardens, some of the plots
are inevitably lost—the gardeners that lose their plots either do not want to start all over again or look for
plots in another garden colony. Plots in other garden colonies are generally easy to find since there is
about a 10% turnover rate each year (conversation with Andre Rodenburg, 21 March 2001).

Policy Framework

In the Netherlands, national spatial policies aimed at both compact city development and environmental
improvement of urbanized areas have in effect supported community gardens as an urban land use.
Moreover, local land use planning, through master plans and local development plans, has also provided
protection for community gardens throughout the country.

National Policies: Compact City Policy and Green Structure Plans

Although there has been no legislation passed at the federal level to ensure the long-term preservation of
the community gardens in the Netherlands, there are national spatial planning policies that support the
role of community gardens as an urban land use. In the Netherlands, there is a long tradition in spatial
planning—indeed, every square meter of land in the country is thoroughly planned. The main guiding
force of spatial planning in the Netherlands is the compact city policy, which aims at concentrating future
growth in residential and commercial activities in already built-up areas or locations adjacent to built-up
areas. The main objectives of this policy are to strengthen existing urban areas and to protect open areas
from population and development pressures. However, an unintended consequence of this strategy has
been a compromised environmental quality in urban areas, since the intensive use of land has caused
environmental problems such as air and water pollution and soil contamination. The community gardens
could potentially play an integral role in this compact city strategy. That is, the introduction and
preservation of greenspace, such as allotment gardens, in these urbanized areas could improve both the
environmental and aesthetic quality of the urban areas. Moreover, the community gardens could be
paramount in defending the countryside against population and development pressures, since without the
gardens, many residents of high-rise flats in central city locations might move to more peripheral
locations where they can have their own detached house with a garden (conversation with Bert Lunshof,
16 February 2001).

Recognizing the need to better integrate environmental improvement and spatial planning, the national
government enacted a law that requires each municipality to preserve a certain portion of the land area as
greenspace (conversation with Andre Rodenburg, 21 March 2001). As a result of the federal law, many
cities throughout the Netherlands have formulated “green structure plans” which identify areas throughout
the municipality that are to be preserved as greenspace. About one half of the allotments in the city of
Amsterdam are included in the green structure plan for the city. Since, by federal law, green areas
designated in structure plans cannot be taken away, the allotments that are included in the structure plan
for Amsterdam are fairly secure. Even though technically these gardens could be converted to another
green use, such as a park or ballfields, the conversion of community gardens to another green use has yet to occur in Amsterdam (conversation with Andre Rodenburg, 21 March 2001).

Local Land Use Planning

The Dutch Spatial Planning Act of 1965 and significant amendments in 1986 and 1994 outline the process of spatial planning in the Netherlands at the national, local, and municipal levels. With respect to the municipal level, as in Germany, the local land use planning system in the Netherlands is a two-tier process with the formulation of a master plan for the city (struktuurplan) and local land use plans (bestemmingsplannen) for distinct areas throughout the city. The master plan for a city is strategic in nature, offering a broad outline for the future development of the entire municipality over a 10-year time period. The procedure for developing a master plan is fairly streamlined—with the local authorities preparing the plan and making it available for public inspection. Following consultations with interested parties, the municipal council adopts the plan, with or without modifications (Ministry of Housing, Spatial Planning and the Environment 1997).

Most important in the local land use planning process in the Netherlands are the bestemmingsplannen since these are the only spatial plans that are legally binding for both citizens and government bodies. As a result of the legal standing of these plans, the local land use plans give a high degree of clarity and certainty to both citizens and private developers with respect to the future development of a certain area. In contrast to the master plan process, the procedures for developing local land use plans and for modifying them are rather complex, due to their legal force (Ministry of Housing, Spatial Planning and the Environment 1997). Clearly, the most permanent way to secure the land tenure of community gardens in the Netherlands is through the designation of them as such in the local land use plans.

In the past, community gardens in Rotterdam were designated in local land use plans as recreation or greenspace; however, over the last few years many of the local land use plans have been changed to specifically designate these lands as “volkstuinen”, or people’s gardens. This designation is crucial to the preservation of community gardens in the city because this designation affords the gardens special protection. That is, if the gardens were to remain designated as recreation or greenspace, the municipality could change the use of these lands without any specific public participation procedures. However, under this new designation, in order to terminate the leases of the gardens, the municipality has to go through stringent procedures, which include a participatory process, compensation for the property and emotional damage, and finding new land for the terminated gardens (conversation with Yvonne Hitzert, 22 February 2001).

As for the community gardens in Amsterdam, some of the gardens are identified as “volkstuinen” in the local land use plans, while others are identified as “greenspace”. Designating these gardens as “volkstuinen” clearly ensures a greater degree of land security, as gardens designated as “greenspace” can easily be converted to other green uses such as ballfields or parks. In order to change the use of a designated volkstuinen, the new plan would have to be approved by district, municipal, and provincial governments and go through a rigorous public approval process. There are also some gardens that are designated in the local land use plans as having a commercial or residential function; clearly these gardens have rather limited land security.

Even though the majority of gardens in both Amsterdam and Rotterdam are given a considerable amount of protection in the local land use plans, the current sites on which community gardens are located is far from secure in that the gardens can be legally terminated and relocated by the municipal government. Indeed, the main threat to the future of the community gardens in Rotterdam is the new master plan for the city that was approved by the city council on 22 March 2001 (correspondence with Yvonne Hitzert, 23 March 2001). In the master plan for 2010, about 1,400 plots in the northern part of the city are to be
replaced by expensive housing. The municipal government is currently negotiating with neighboring municipalities to purchase land for the relocation of these terminated gardens. RBVV and its members, unsatisfied with this decision since the amount of land will definitely diminish and the distance from the users will be greater, continue to mount considerable political pressure, with over three hundred members attending a city council meeting to voice their concerns as recently as 8 March 2001. As for Amsterdam, the municipality is currently in the initial stages of formulating a new master plan for the city. There are two board members of ABVV who are sitting in on the planning process and city council meetings to ensure that the allotments are included in the new master plan (conversation with Andre Rodenburg, 21 March 2001).

Institutional Climate

In the Netherlands, as in Germany, both garden associations and government agencies play significant roles in the day-to-day management and long-term preservation of community gardens throughout the country. Nevertheless, in the Netherlands garden associations generally are not as well organized and play a more limited role than their counterparts in Germany. However, the responsible government agencies play a more integral role in the Netherlands than in Germany, since they not only are the landlords of the garden associations, but also offer technical and financial support to the gardens and even manage their own gardens throughout some cities.

Garden Associations

As in Germany, gardening associations play a large role in ensuring the long-term preservation of the community gardens in the Netherlands; nonetheless, the associations in the Netherlands are not quite as well organized as they are in Germany. There is a Dutch national gardening association, Algemeen Verbond Van Volkstuinders Verenigingen in Nederland, which gives legal advice regarding long-term contracts to its members. However, only 180 associations accounting for only 25,000 of the 240,000 allotment gardens in the country are organized under this national association (correspondence with Herman Vroklage, 2 March 2001). All in all, only a little over 10 percent of the community gardens throughout the Netherlands are organized in the national association and 50 percent of the gardens are not organized in any association. In sharp contrast, in Germany 80 percent of the of the gardens are organized under the national association and only 10 percent are not organized through any association (Bundesministeium fur Raumordnung, Bauwesen and Stadtebau 1998). Figure 6 presents some of these statistics regarding the national community gardening associations in the Netherlands and Germany.

FIGURE 6. The Role of National Gardening Associations in the Netherlands and Germany

<table>
<thead>
<tr>
<th></th>
<th>THE NETHERLANDS</th>
<th>GERMANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>15.8 million</td>
<td>82.8 million</td>
</tr>
<tr>
<td>Number of Allotments</td>
<td>240,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Inhabitants:Allotment</td>
<td>66:1</td>
<td>64:1</td>
</tr>
<tr>
<td>Membership of National Association</td>
<td>180 local associations</td>
<td>15,000 local associations</td>
</tr>
<tr>
<td>Percent of Allotments Organized by National Association</td>
<td>10%</td>
<td>80%</td>
</tr>
<tr>
<td>Percent of Allotments Organized by Other Associations</td>
<td>40%</td>
<td>10%</td>
</tr>
<tr>
<td>Percent of Allotments Unorganized</td>
<td>50%</td>
<td>10%</td>
</tr>
</tbody>
</table>
Moreover, even though there is a national association of allotment gardeners in the Netherlands, there is no real hierarchy of gardening associations in the Netherlands. That is, there are no clear links between local and municipal associations and the national association. The municipal associations such as the Bond van Volkstuinders in both Amsterdam and Rotterdam could potentially serve an intermediary function between the local associations and the national association; however, presently, a local association in the city of Amsterdam (or in Rotterdam for that matter) may be a member of the national association without being organized under the municipal association. Therefore, collective organizing is somewhat disjoint in the Netherlands, and as a result the allotment holders do not carry as much political clout as they do in Germany.

Although the gardening associations are not as well organized in the Netherlands as they are in Germany, their accomplishments should not be overlooked. In particular, the municipal association in Rotterdam has been very successful in organizing its members to fight for the protection of the allotments throughout the city. For example, in 1997 a number of gardens in the city were threatened by a proposal for a new soccer stadium. However, the allotment holders mobilized with 2,000 members marching on Town Hall, and successfully convinced the municipality that the proposed location was not appropriate for the soccer stadium. The political organizing activities of the municipal association in Amsterdam have also led to the protection of the gardens throughout Amsterdam. More specifically, in 1998 the association in Amsterdam published their own policy plan called “Samen Sterk 1998-2007” (Together Strong)—in this plan, there is a special section that outlines strategies to secure land tenure, including getting longer-term contracts with the municipality, more gardens designated as such in the local land use plans, and more gardens included in the green structure plan for the city (Amsterdam Bond van Volkstuinders 1998).

Responsible Government Agencies

In the Netherlands, the degree of municipal support of the community gardens varies from city to city. For example, in the city of Groningen, the community gardens are organized by the Public Works Department, which aside from being the landlord of the local gardening associations, has a rather limited role in the oversight of community gardening activities (conversation with Elzo Brueggers, 25 January 2001). On the contrary, the Sports and Recreation Department of the Municipality of Rotterdam is the landlord of the gardens organized by Rotterdamse bond van Volkstuinders; this government department, along with other municipal agencies, plays a significant role in the day-to-day management and long-term preservation of the community gardens. In fact, part of the preservation of community gardens in Rotterdam is due to the long-term institutional support of the gardens by the municipal government.

The municipal government in Rotterdam currently provides services and infrastructure to the gardens including roads and water, and maintains the common areas of the garden colonies. Despite this past government support, the association in Rotterdam feels that the continuation of this municipal support might be insecure since every now and then the government needs to cut the capital improvements budget and, in the past, government monies for the maintenance of the gardens and provision of water have been reduced (conversation with Yvonne Hizert, 22 February 2001). In Rotterdam, the municipal government has also given the association special grants to help fund projects—for example, last year the association received a special grant from the municipality to inform their members of the impending changes to the allotments resulting from the new master plan for the city. Moreover, as discussed previously, the Sports and Recreation Department of the Municipality of Rotterdam manages 21 community gardens throughout the city for use as educational gardens for elementary schoolchildren and recreation for elderly citizens (correspondence with Gerard Reitsma, 13 March 2001).

In contrast to Rotterdam, in Amsterdam each garden community is responsible for its own water provision and maintenance of common areas; however, some of the district governments give back to the
local association as much as 40% of the rent the association paid for that garden site (74 cents per square meter per year) to help cover the maintenance of the common areas. Moreover, although the allotment holders in Rotterdam are not given any tax concessions on the gardens, the gardeners in Amsterdam do not have to pay taxes on their individual garden plots, only on the common areas of the garden communities (conversation with Andre Rodenburg, 21 March 2001).

**Outlook for Community Gardens in the Netherlands**

Since the community gardens play an integral role in the spatial planning of the Netherlands, given the compact city strategy and environmental policies of the country, in the past there has been widespread support for the gardens on the part of the local government authorities and land use planners. As a result, many of the community gardens throughout the Netherlands have been secured in local land use plans. However, there are some recent developments that show that this traditional governmental support might be diminishing. Particularly alarming is the loss of 1,400 gardens in the city of Rotterdam as a result of the new master plan for the city. In light of recent development pressures in both Rotterdam and Amsterdam, the community gardeners in the Netherlands need to more effectively mobilize beyond the local level, under the guidance of the national association. During a time in which Dutch spatial planning is focusing on environmental improvement and urban regeneration, the associations must seize the opportunity to get community gardening more directly on the national spatial planning agenda.
LESSONS LEARNED

The first part of this section on lessons learned briefly summarizes the findings of this research project by each country. After reviewing the key findings, the final portion of this section proposes some strategies for incorporating community gardens into land use planning and policy in the United States, drawing upon findings across the three countries. This discussion is broken down into four main categories: inclusion in local plans, inclusion in state and federal policies, designation of responsible local government agencies, and collaboration between public, private, and non-profit actors.

Summary of Findings

The United States

Although community gardens have been on the urban scene in the United States since the late 19th century, the security of the gardens throughout the years has largely been dependent on official government support during times of economic and political crisis. In today’s time of relative peace and prosperity, community gardens in many cities throughout the United States have little protection through government policies, as local officials seek to attract more lucrative land uses to center cities. As a result, community gardens in the United States are commonly regarded as an interim use of urban land that is ultimately earmarked for other purposes. However, community gardens are certainly not a temporary use of urban land and should not be regarded as such, with many existing gardens across the country being rooted in their local communities for more than 20 years. Community gardens across the United States clearly need better protection through the local land use planning process, as experiences in New York City and similar experiences throughout the country demonstrate, to ensure the perpetuation of these vital community assets. Although there are promising developments in some cities in the United States, with such cities as Chicago and Seattle creating specific government agencies responsible for the oversight of community gardening activities and appropriately designating community gardens in local plans, more cities throughout the country need to follow their lead. In order for this to occur though, community gardeners across the United States need to more effectively organize on both the local and national levels and demand that government officials account for their interests in the land use planning process.

Germany

Community gardens have been a mainstay on the urban scene in Germany since the beginning of the 19th century. Despite the changing objectives of these gardens throughout the years, from food security and environmental improvement purposes to their present-day recreational function, the gardens have always been considered an integral part of center cities in Germany and have largely been protected through local land use plans and even federal legislation. Nonetheless, the main driving force behind the preservation of community gardens in Germany is the actual gardeners themselves who have effectively organized on the neighborhood, municipal, and national levels, and, as a result, are deeply entrenched in the political climate of Germany. Despite the political activism of the gardeners and the high percentage of gardens secured in master plans, the gardeners in Germany need to continue to mount pressure on local and federal legislators to secure more gardens in legally-binding obligatory land use plans.

The Netherlands

As in Germany, community gardens in the Netherlands have been a mainstay on the urban landscape since their initial appearance in the 19th century. In fact, throughout the years, the community gardens have played a significant role in federal policies including the compact city strategy and the integration of
environmental improvement and urban planning. With respect to the compact city strategy, community gardens are viewed as a way of curbing development pressure on the rural countryside by providing land for urban dwellers to cultivate close to their homes. With respect to environmental improvement, community gardens help remedy the environmental problems, such as water, soil, and air pollution, that result from the intensive use of center city land in the Netherlands. All in all, the preservation of community gardens in the Netherlands has been attributable to government support and the subsequent inclusion in master plans and local land use plans. Nonetheless, there are recent developments that prove that community gardeners in the Netherlands cannot necessarily continue to rely on this traditional government support for community gardens. Although there are currently various garden associations across the Netherlands representing the interests of community gardeners to local government officials, the individual garden associations need to more effectively organize on a larger scale to mount political pressure on government officials, as they have successfully done in Germany.

**Recommendations**

Since restrictive policies that fail to appropriately designate community gardens in local plans and unsupportive local authorities who would rather attract more lucrative land uses to community garden sites are the two biggest threats to community gardens in the United States, much of the discussion throughout this paper has focused on the policy framework and institutional climate surrounding community gardening activities in the three countries. The recommendations proposed in this final section are in keeping with this format—with the recommendation to include community gardens in local plans and state and national policies stemming from the discussion on policy framework, and the proposals to designate or create a local government agency responsible for the oversight of gardening activities and to better collaborate between public, private, and non-profit actors coming out of the discussion on institutional climate.

**Inclusion in Local Plans**

The main threat to the preservation of community gardens in the United States is that they are still largely considered an interim use of urban land and, therefore, are not appropriately designated in comprehensive and land use plans and zoning ordinances. Therefore, community gardens in many cities throughout the United States have no legal protection through the land use planning process, as opposed to gardens in both Germany and the Netherlands, which are given relatively considerable amounts of protection through strategic master plans and legally binding local land use plans.

The main reaction to the insecure land tenure of community gardens in the United States has been to purchase the insecure garden sites through public land trusts. Although public land trusts serve an integral function in protecting community gardens in perpetuity, they should not and cannot be overly relied on since there is simply not enough money to purchase all of the gardens through fee simple purchase.

Rather than concentrating efforts on the fee simple acquisition of community garden sites through public land trusts, community gardeners should be more active in getting community gardens established as a priority land use and appropriately designated in comprehensive plans, small area plans, and zoning ordinances. Including community gardens in these relevant plans would reduce development pressures on existing garden sites since this inclusion would afford the gardens considerable legal protection. By properly designating the community gardens in zoning plans, rather than considering them vacant lots, should there be any proposed change of land use, the interests of the gardeners would be taken into account during a public review process. In light of the growing political activism of the gardening community in the United States, it would surely be quite difficult to get such a rezoning approved. In short, the recognition of community gardens as an existing land use and the designation as such would
institutionalize support for community gardens and prove invaluable to the perpetuation of community gardens and the essential role they play in the urban fabric.

In addition to the inclusion of existing community gardens in comprehensive plans, small area plans, and zoning ordinances, existing and potential community gardens sites should be identified in open space plans to ensure not only the preservation of existing gardens, but also the future expansion of community gardening activities. As in the cases of Chicago and Amsterdam, open space plans (or green structure plans) that identify both existing and potential garden sites and set forth implementation measures and funding mechanisms to protect existing gardens and acquire gardens in the future have proven invaluable in protecting and even encouraging community gardening.

Inclusion in State and Federal Policies

Tracing the history of community gardens in the United States, it is clear that during periods of official government support, beyond the local level, community gardens have flourished. Similarly, in Germany and the Netherlands federal support in the form of national legislation and policies have established community gardens as a priority land use and, as a result, have advanced the community gardening movement. More specifically, in Germany the Federal Allotment Garden Act sets forth specific legislation that institutionalizes national support for the community gardening movement, and in the Netherlands, community gardens play a significant role in the realization of the Dutch compact city policy.

Unfortunately, this type of supra-local support for community gardens has only occurred in the United States during times of political and economic instability. Today, there are few efforts on both the national and state levels in the United States to advance the cause of community gardening. Although there are federal programs that provide funding and technical assistance to fledgling community gardens, such as the Community Food Project grant program through the United States Department of Agriculture, in contrast to Germany and the Netherlands, there is no federal policy protecting community gardens through land use planning. There is a simple reason for that—which is that in the United States, land use planning remains a distinctively local issue, with little to no federal oversight.

Nevertheless, there is currently a strong movement in the United States toward the formulation of state growth management programs. Similar to the Dutch compact city strategy, states across the United States are beginning to adopt smart growth strategies that aim to redirect future expansion in commercial and residential activities in already built-up areas or areas immediately adjacent to already built-up areas. There are many driving forces behind this smart growth strategy including economic, equity, and environmental arguments. More specifically, by redirecting growth to already built-up areas, unnecessary infrastructure investments will be avoided, urban regeneration efforts will be facilitated, and the rural countryside and open spaces will be protected from development pressures. Community gardens can play an integral role in any state growth management strategy, as they have in the compact city strategy of the Netherlands. That is, there might prove to be less of a housing preference for detached houses in suburban locations if citizens were given the alternative of living in a central city location with land easily accessible to call their own.

Designation of Responsible Local Government Agency

The degree of municipal support for community gardens in the form of the designation or creation of a responsible local government agency varies from country to county, and indeed within countries, from city to city. In the United States, a handful of cities have created government agencies responsible for the oversight of community gardening activities, such as Green Thumb in New York City, NeighborSpace in Chicago, and the P-Patch Program in Seattle. Nevertheless, the responsibilities of these government
agencies vary widely from city to city, as does the degree to which these agencies actually advocate the interests of the community gardeners. More specifically, while some government agencies serve merely as the landlord to local garden associations, others play a more active role, acquiring land for existing and new garden sites, ensuring adequate infrastructure investments, and providing other financial and technical assistance to community gardens. The situation is similar in Germany and the Netherlands, where the degree to which the city is involved in community gardening affairs really depends on local circumstances.

What is clear from the case studies, however, is that the presence of a government agency or staff person responsible for both the day-to-day management and long-term preservation of the community gardens is essential to the success of a community gardening program. That is, the designation or creation of a responsible local government agency provides institutional support for community garden programs, in addition to potentially opening up new opportunities for community gardens throughout the city. A responsible government agency would have access to information from other pertinent government agencies such as the planning, economic development, transportation, and housing departments, and have a certain degree of influence over public decision-making. Non-profit and private organizations, which have traditionally been the driving force behind the community gardening movement, operate outside the structure of city government and, therefore, have limited access to this kind of information and decision-making power.

Collaboration between Public, Private, and Non-Profit Actors

While it is clear that local government support and leadership are essential to the preservation and creation of community gardens, it is equally as evident that in light of limited government support for urban gardening in the United States, non-profit and private entities must continue their fight to get community gardens more directly on the urban land use planning agenda. Experiences in Chicago and Seattle prove that in some cities in the United States government agencies are committed to the cause of community gardening and, as a result, play a significant role in both the day-to-day management of gardening activities and the long-term preservation of community gardens. Nevertheless, gardeners themselves must play a more active role in ensuring the protection and perpetuation of community gardens. In order to do this, community gardeners throughout the United States must organize more effectively beyond the neighborhood level and collaborate with municipal and even state government authorities.

Germany provides an excellent example of the power of collaboration, with community gardening associations forming on the neighborhood, municipal, state, and federal levels, to make sure that the interests of the gardeners are accounted for not only in local land use plans, but also in national policies. It is through this collective bargaining that gardening associations have been able to form close working-relationships with the borough parks departments and the state department for landscape and open space planning. The key feature of this successful collaboration is that the gardening associations have struck an appropriate balance between political pressure and conciliation in order to form a working-relationship with local government authorities.

Indeed, the community gardeners in the United States must position themselves in such a way that government officials on both local and national levels will simply not be able to afford ignoring their interests and, as a result, will include them in decision-making processes. In short, strong partnerships between grassroots organizations, gardening associations, relevant government agencies, and local land use planners can be effective in both increasing support for community gardens and implementing successful gardening programs.
REFERENCES


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USEFUL WEB-SITES

American Community Gardening Association
www.communitygarden.org
Bundesverband Deutscher Gartenfreunde
www.kleingarten-bund.de
City Farmer – Vancouver, Canada
www.cityfarmer.org
Community Food Security Coalition
www.foodsecurity.org
Dudley Street Neighborhood Initiative
www.dsn.org
Food and Agriculture Organization of the United Nations (FAO) – Rome, Italy
www.fao.org
Green Guerillas
www.greenguerillas.org
International Development Research Centre (IDRC) – Ottawa, Canada
www.idrc.ca
Landesverband Berlin der Gartenfreunde
www.gartenfreunde-berlin.de
Resource Center on Urban Agriculture and Forestry (RUAF) – Leusden, Netherlands
www.ruaf.org
Rotterdamse bond van Volkstuinders
www.rbvv.nl
San Francisco League of Urban Gardeners
www.slug-sf.org
The Food Project
www.thefoodproject.org
The Trust for Public Land
www.tpl.org
Urban Agriculture Network (TUAN) – Washington D.C.
www.cityfarmer.org/TUAN.html