Ontario's Greenbelt in an International Context

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Comparing Ontario's Greenbelt to its Counterparts in Europe and North America

Written and researched by the Canadian Institute for Environmental Law and Policy

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Executive Summary

Ontario's Greenbelt is positioned to be the most successful and most useful Greenbelt in the world. As the largest greenbelt, the Ontario Greenbelt is an area of permanently protected land spanning 1.8 million acres across southern Ontario. The area stretches from Niagara Falls to Tobermory to Peterborough and encompasses green space, farmland, vibrant communities, forests, wetlands and watersheds. It surrounds the province's Golden Horseshoe – the most populated area of Canada, and is vital to the quality of life in southern Ontario.

The purpose of the Greenbelt is to protect key environmentally sensitive lands and farmlands from development and sprawl.

This research report outlines six international areas in Europe and North America that have established greenbelts near rapidly growing urban areas. It takes a detailed look at the London, UK Green Belt; Germany's Iron Curtain Green Belt; the Netherlands' Green Heart and Randstad region; the Portland, Oregon Urban Growth Boundary; and British Columbia's Agricultural Land Reserve; as well as the Ontario Greenbelt.

Most of these regions have existed for several decades, some for centuries, and provide valu-

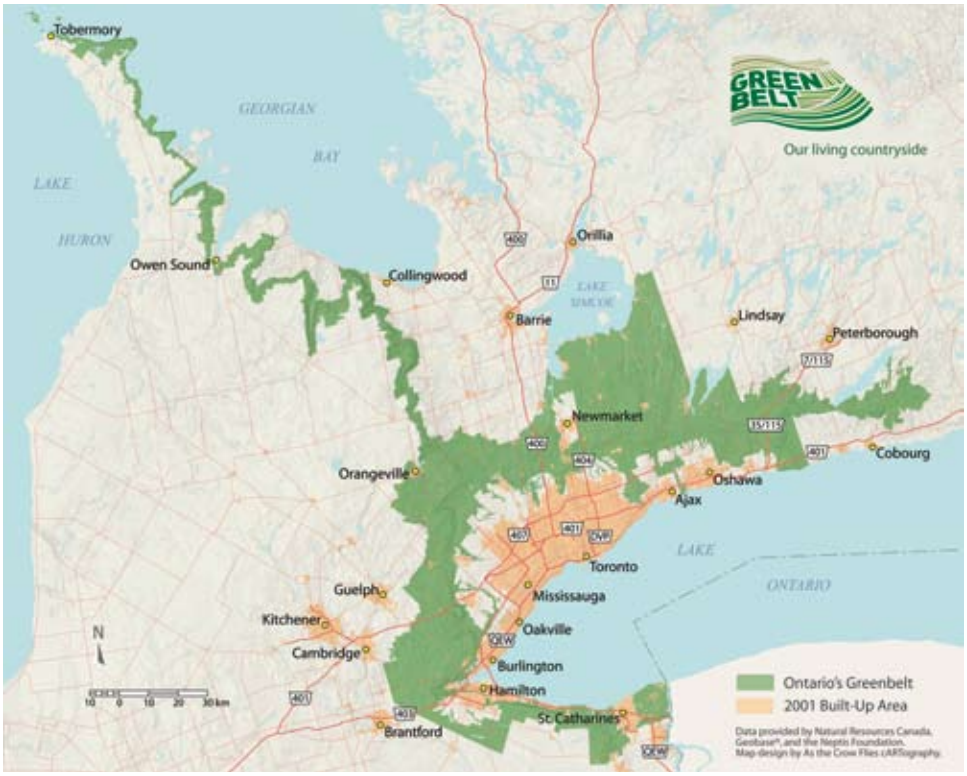
able insights into the political issues that are confronted and successes and challenges experienced by jurisdictions with respect to greenbelts. These areas were chosen for various reasons including: the longevity of the greenbelt areas; similar values and goals relating to agriculture, natural heritage, and tourism and recreation; similar housing and development pressures faced; and the acknowledged need to curb urban sprawl and encourage sustainable transportation and infrastructure in the regions.

The Canadian Institute for Environmental Law and Policy (CIELAP) received a $15,000 grant from the *Friends of the Greenbelt Foundation* in order to complete this study on international greenbelts and to provide an analysis of these major greenbelts as well as a list of recommendations for improving the Ontario Greenbelt. Although published in 2008, the majority of the research took place in 2007.

This study was undertaken for the *Friends of the Greenbelt Foundation*: an independent, charitable foundation started in June 2005 with a mandate to fund organizations like CIELAP that support farming, the environment and rural communities located in the Ontario Greenbelt. The paper was created in hopes of assisting the *Foundation* in its mission to promote and sustain the Ontario Greenbelt as a beneficial, valuable and permanent feature that enhances the quality of life for all Ontario residents.

The purpose of this study is to explore the lessons learned in greenbelts in those jurisdictions around the globe. It identifies policies and activities resulting in successes or proven challenges within these jurisdictions and helps distinguish ways to improve the Ontario Greenbelt. Knowledge may be gained from determining the governance structures and policies that have supported and en-

Figure 1 - Ontario Greenbelt



couraged rural communities, agriculture and the environment in other greenbelts. There are lessons to be learned from greenbelt regions that thrive economically and socially, engage rural and urban citizens through agriculture and tourism and enhance the natural environment.

Although significantly later than most of these jurisdictions, Ontario has recently put in place both a greenbelt and a mechanism to develop regional urban growth rules through the Places to Grow Act.

Analysis of the different greenbelts in the jurisdictions studied reveals the following lessons to be learned in order to strengthen the Ontario Greenbelt:

1) Governance, Research and Public Policy

• Decentralized governance models and deregulation initiatives weaken greenbelt protection. In the UK Green Belt during the 1980s and 1990s, government policies supported market-led development, which influenced local planning policies. At the same time, the central government cut funding to local authorities and instead encouraged them to partner with private development interests. The combined effect of these decisions was to weaken the ability of local planning authorities to act in the public interest and oppose excessive development in order to protect the environment and agriculture.

• A clear governance structure is needed. Multiple goals for the Ontario Greenbelt in agriculture, tourism and protecting sensitive natural heritage environments, means several different Ontario ministries are involved. A governance structure that integrates these responsibilities like the UK's Department for Environment Food and Rural Affairs (Defra) is ideal. This ensures that environmental, agricultural and rural concerns are less likely to be seen as competing values.

• Proper data collection and research should be undertaken on the effects of greenbelt policy. As was learned with Portland's Urban Growth Boundary (UGB), stakeholders who opposed greenbelt policies used the argument that the UGB had an adverse effect on the cost of housing. However, research shows that Portland's UGB had a relatively small effect on housing prices and that it was not inevitable that UGBs would cause housing prices to rise faster.

• Limiting urban growth leads to efficient infrastructure building decisions. In Portland, Oregon, the region assists deciding how infrastructure should be built. As a result, money can be focused on public transit and existing roads instead of extending roads into new areas.

• Government and tribunal decisions about greenbelts must be transparent and accountable, and clearly protect the environment, agriculture and rural nature of the greenbelt. BC's Agricultural Land Commission has been criticized for a lack of openness in rela-

tion to applications for ALR removals, subdivisions, and non-farm uses.
2) Support for Farmers, Quality Farmland and Local Food

• Effective programs in support of greenbelt farmers are vital. Examples in the UK include the Environmental Stewardship program that rewards farmers for effective environmental land management and the English Woodland Grant Scheme that provides grants to sustain and increase benefits of existing woodlands and to create new woodlands.

• Long-term public funding must be available to recognize and support the landscape conservation work that farmers undertake on behalf of the public. The UK has financial programs that have been developed to acknowledge the fact that farmers provide many public benefits that are not adequately rewarded through their sales of farm produce.

• Programs to assist greenbelt farmers and rural residents in developing innovative businesses relating to agriculture are needed. Programs in the UK include: farmers' markets, and ethnic and specialty markets; support for organic farming; recreational and tourism activities; and promotion of local, sustainable food production and connections between consumers and the origins of the food they eat.

• Local food webs to link people and businesses that grow, process, sell and buy food within a local region are beneficial. The UK Green Belt has a comprehensive website at www.Localfoodweb.co.uk that provides consumers with a searchable directory of farm shops, specialty food retailers, farmers' markets and rural stores, and a forum to exchange recommendations with other consumers. In Portland, local governments have developed programs to assist in promoting a regional food economy.

• Local products should be branded as such to reinforce a direct association for the consumer between the local product and the greenbelt area, to promote local agriculture. In the Netherlands, farmers have joined together to open shops to sell local products grown and made in the area, branded as Green Heart Products.

• Programs should be directed at changing food preferences to be more inclusive of greenbelt products. Portland initiatives include collaborative chefs' organizations that support and emphasize local produce on restaurant menus, and the development of Community Supported Agriculture (CSA) programs that allow consumers to buy shares in a farm in exchange for a supply of produce and a direct relationship with the farmer.

3) Education

• Education promotes understanding of rural values, natural heritage and agriculture, and connects urban and rural communities. In the UK, farmers provide opportunities for recreation and tourism activities as well as education about local food by opening

their farms to the public. In Germany, a short-term 'Experience the Green Belt' program is being considered to promote the Iron Curtain Green Belt and teach students about its nature, history and rural culture.

4) Accessibility

• Physical and economic accessibility to greenbelts is important. This has been observed as a shortcoming in the UK Green Belt, resulting in specific recommendations for London that the following be established: adequate and efficient public transit connecting residents to protected rural spaces and parks in the greenbelt; many connected walking and cycling routes; minimal or non-existent entrance fees to parks; and trails and public transit that are accessible to those with physical disabilities.

• Cultural accessibility to greenbelts is important. Recent recommendations directed at the UK Green Belt suggest that information about the greenbelt be made available in multiple languages and distributed to people of different ethnic backgrounds and that efforts be made to ensure everyone feels welcome, comfortable and secure in the greenbelt.

5) Fundraising

• Public fundraising programs should be established to support the greenbelt and foster connections to it. In Germany, BUND has established Green Share Certificates to fund measures aimed at protecting and restoring unique or threatened habitats in the Iron Curtain Green Belt, and at providing donors with a direct connection to the Green Belt.

Based on these lessons learned, the following recommendations for the Ontario Greenbelt are provided.

Recommendations:

This list of recommendations is by no means exhaustive. Rather, they are early observations to ensure the Ontario Greenbelt remains a world-leading Greenbelt.

1) Reducing Development Pressure

• Efforts should be made to grow the Greenbelt in size in order to eliminate leapfrog development. There is evidence of leapfrog development occurring in areas surrounding the Greenbelt, such as Simcoe County. This type of development is an inefficient use of land leading to greater pressure to build sewer and water infrastructure and highways and roads through the Greenbelt to service areas with few homes and jobs per square kilometer.

Some municipalities have shown interest in becoming a part of the Greenbelt

such as Guelph. Creating a larger area of land to prevent uncontrolled urban development and sprawl would mean a healthier Ontario for all.

• The ambitious transit goals of MoveOntario 2020, a multi-year $17.5 billion dollar rapid transit action plan for the Greater Toronto Area and Hamilton, should be implemented. The Plan reduces car dependence which will alleviate congestion and air quality concerns in the area and pressures to build more highways and roads in the Greenbelt. The Plan will reduce car trips by 300 million and create 800 million new transit trips, reducing CO2 emissions by 10 megatonnes. The Plan is also integral to the success of Places to Grow.

• Over the coming years, research should be undertaken to measure the influence of lifestyle choices on the permanency of the Greenbelt including trends in agricultural profitability in the Greenbelt, infrastructure development, human health and the cost of housing in surrounding cities.

2) Environmental Contributions

• The province and rural communities in the Greenbelt should begin to account for the non-market value of the natural capital of the Greenbelt, including its climate regulating forests, clean water resources and source of local food. These economic values should be integrated into future land use policies and decisions.

• Stronger protection for environmentally-sensitive lands and prime agricultural lands outside the Greenbelt within Places to Grow is needed to maintain the health of viability of these features in the Greenbelt.

3) Viable Agriculture

• The provincial and federal governments should be encouraged to develop programs for Greenbelt farmers similar to the UK's Environmental Stewardship, which rewards farmers for effective environmental management of their land; and the English Woodland Grant Scheme, which provides grants to sustain and increase the benefits of existing woodlands and to help create new woodlands. The province should consider a Greenbelt wide Alternative Land Use Services (ALUS) concept similar to that introduced in Norfolk, Ontario. ALUS is an agricultural policy concept that compensates farmers financially for implementing environmental stewardship activities that benefit everyone while at the same time motivating the conservation and protection of key environmental assets in the Greenbelt. The compensation would contribute to the viability of farming in the Greenbelt, an industry which has experienced increased land and businesses costs due to urban development and sprawl among other factors.

• Support should be offered by provincial and federal governments to farmers and rural residents in the Greenbelt who wish to develop innovative businesses relating

to agriculture such as farmers' markets, ethnic and specialty markets, organic farming and recreational and tourism activities. Promotion of local, sustainable food production and connections between consumers and the origins of the food they eat are also necessary.

• Efforts should be made by provincial and federal governments to create local food webs to link people and businesses that grow, process, sell and buy food within a local region. Both municipal and public institutions should lead by example by creating food policies that make local food more readily available to the consumer. The government should also create an incentive program that encourages people to buy local. A program similar to the Netherlands' Green Heart Products could also help promote local agriculture in the Greenbelt by branding local products and thereby reinforcing a direct association for the consumer between the local product and the Greenbelt. A comprehensive website such as www.Localfoodweb.co.uk could provide consumers with a searchable directory of farm shops, specialty food retailers, farmers' markets and rural stores, and a forum to exchange recommendations with other consumers.

• The provincial and federal governments should fund research on the factors likely to impair the viability of farming in the Greenbelt now and in the future, and develop policies to support Greenbelt farms and farming practices that contribute to the health of communities and the environment.

• Steps should be taken to ensure that the local food available in the Greenbelt reflects the diversity of people who live in and around it. According to the 2006 Canadian Census, more than 50 per cent of Canada's visible minority population resides in Ontario. A multicultural Ontario should celebrate with a diverse assortment of food.

• Steps should be taken to ensure that farmland in the Greenbelt stays productive so that the area can continue to provide a secure local food source in the future. The province should support the growth of the newly founded FarmLINK program, designed by FarmStart and the University of Guelph, which links farmers with rural landowners that own prime farmland.

4) Governance, Research and Public Policy

• A high level inter-ministerial working group should be established to develop Greenbelt supportive policies.

5) Education

• Building on the success of the Grade 7-9 Ontario Public School curriculum on the Greenbelt, the opportunity to include the Ontario Greenbelt in the curriculum throughout all grades should be explored. Public education about the Greenbelt could be promoted through short-term immersion programs to promote the Greenbelt and to edu-

cate the public about it and teach students about the nature, history and rural culture of the Greenbelt.

• The provincial government should make it mandatory for secondary students to obtain a food knowledge certificate in order for them to graduate. A curriculum review completed by the Ontario Farm to School Network, which grew out of conference held by FoodShare, found that education about the production, acquisition, preparation and consumption of food and its relationship to health is almost non-existent in Ontario.

1

Introduction

Greenbelts are defined broadly as:

> Swaths of natural or open land surrounding cities or towns. They often contain a mix of public land and privately held land on which development restrictions are placed.[1]

Strictly speaking, not all of the regions described in this paper are greenbelts. The Green Heart in the Netherlands is not a belt around a city; instead it is a protected area surrounded by a ring of cities. An urban growth boundary such as the one in Portland, Oregon divides rural from urban land instead of enclosing a parcel of land in which development is restricted.[2] However, all of the jurisdictions considered here function in ways that are similar to the Ontario Greenbelt and share at least some of the same purposes.

This report attempts to address the following questions in relation to each of the greenbelts under review:

A. What is the legal structure of the greenbelt and its protective mechanism? What levels of protection have been extended to areas within the greenbelt?

B. What are the distinctive features of the greenbelt, including: size; natural features; function; urban-rural relationship; and length of time it has existed? Maps will be provided in the report to show urban areas in relation to protected greenbelt areas.

C. Who are the state and non-state actors involved in stewardship of the greenbelt?

D. What political issues have been faced in the past or are being faced at the present time?

E. What are the known successes and challenges of the greenbelt, particularly in relation to farming solutions or development of a regional food economy? What benefits have been realized due to the longevity of the greenbelt if it is has been in place for a significant period of time?

F. What lessons have been learned in the greenbelt region that can be applicable to Ontario's Greenbelt?

Following a detailed review of the five primary jurisdictions other than the Ontario Greenbelt, the paper will briefly note a number of additional interesting examples of greenbelt-like planning tools – finger plans, green wedges, greenways – used in other jurisdictions in North America and Europe.

London, UK Green Belt

In the United Kingdom, many green belt areas have been established around urban centres. As of 1997, there were 14 green belt regions designated in England,[3] covering approximately 1.65 million hectares, or 13 per cent of the country. In Scotland, green belts total about 156,600 hectares, or 2 per cent of the country and in Northern Ireland green belt land covers 226,600 hectares, or 16 per cent of the country.[4] This report will focus on the London Green Belt, the oldest and largest of the green belts in the United Kingdom that has been in place since 1938.

The London Green Belt was selected in particular due to its longevity and the priority placed on agriculture, natural heritage, and tourism and recreation. The London area faces serious housing and development pressures and efforts are being made to encourage sustainable transportation.

German Iron Curtain Green Belt

The former Iron Curtain that separated the east and west of Germany had the unintended side effect of encouraging the conservation or development of significant habitats. This occurred because people were not allowed to enter the border strip leaving it relatively undisturbed and free from cultivation and intensification of land use. Remote and restricted regions near the border strip were left in the same condition. As a result, the green belt area maintained many endangered species and habitats.[5]

Following the fall of the Iron Curtain in 1989, BUND (Bund für Umwelt und Naturschutz

Deutschland) convened a meeting of over 400 nature conservationists from both East and West Germany, where the idea of a "Green Belt" was first applied in relation to the border area. The participants at this meeting agreed to a resolution to protect the unique habitats existing in the German Green Belt.[6]

As with the Ontario Greenbelt, the Iron Curtain Green Belt is meant to support natural heritage, and tourism and recreation values. It also faces pressures due to the region's need for economic development. The Iron Curtain Green Belt differs from the Ontario Greenbelt in that it is solely focused on preserving natural habitat. Consequently, agriculture is viewed as a threat.

Netherlands Green Heart

The term 'Randstad Holland' was first used in the 1930s but only to refer to the group of towns and cities located relatively close to each other in the Western Netherlands.[7] Until the mid-1950s, the Randstad concept was familiar only to the inner circle of the planning community. [8]

In the 1950s, the Working Commission for the Western Netherlands developed the basis for an urban strategy for the Randstad Holland. It released a 1958 report titled 'The Development of the Western Netherlands' that forecasted great population growth and introduced a number of recommendations to control suburban growth, including the development of the Randstad periphery and preservation of agricultural areas. The report laid the foundation for the Randstad and the Green Heart.[9] Protection for the Green Heart was controversial as large-scale development had been planned for the area but the need to preserve agricultural land prevailed.[10]

The Green Heart was chosen for closer study due to its longevity and its similar values and goals relating to agriculture, and tourism and recreation. It also faces housing and development pressures.

Portland, Oregon Urban Growth Boundary

An urban growth boundary (UGB) is a legal boundary that separates urban land, where urban growth is permitted, from rural land.[11] A border is drawn around the urban area to contain growth within that area. In this way, UGBs differ from green belts, which are belts of land that surround a town or city and within which development is restricted. Despite the differences between these planning tools, they share similar purposes and the longevity of the Portland, Oregon UGB, established in 1979, makes it a particularly useful jurisdiction for this study.

The Portland area shares similar values and goals relating to agriculture with Ontario, and also faces housing and development pressures and the desire to combat urban sprawl and encourage sustainable transportation.

British Columbia Agricultural Land Reserve

The provincial government created the Agricultural Land Reserve (ALR) in 1973 in response to concerns that farmland, a scarce resource in the province, was being irretrievably lost.[12] The reserve lands were assembled over the years 1974 to 1976 with the cooperation of regional districts and area municipalities.[13]

The ALR provides an example of another Canadian jurisdiction, in place for many years that

shares goals relating to agricultural preservation and, to some extent, natural heritage, and tourism and recreation. Like many of the other jurisdictions, communities in BC face housing and development pressures and concerns about sprawl and sustainable transportation and infrastructure.

Overview of the Greenbelts

Table 1 - Greenbelt Size Comparison

Greenbelt	Approximate Area		Compared to the size of the City of Toronto
	Hectares	Acres	
Ontario Greenbelt	728,000	1.8 million	11 times
London, UK Green Belt	497,790	1.2 million	8 times
British Columbia Agricultural Land Resource (in relation to the urban centre of Vancouver)	289,755	716,000	5 times
Netherlands Green Heart	160,000	395,368	2.5 times
Portland, Oregon Urban Growth Boundary	102,953	254,403	2 times
German Green Belt	17,700	43,737	.25 times

Table 2 - Ontario Greenbelt – Established 2005

Area	728,000 hectares, 1.8 million acres
Main Objectives/Vision	To safeguard the quality of life in the Golden Horseshoe in anticipation of continuing population growth and urbanization.
Agricultural Features	• Prime agricultural land • Specialty-crop land
Natural Features	• Natural heritage – forests, wetlands, rivers, lakes, etc. • Water-resource systems • Indigenous species • Ecosystems

Governance	Greenbelt Act, 2005 – gives the provincial Cabinet the authority to establish a Greenbelt Plan and to establish a Greenbelt Council to give advice to the Minister of Municipal Affairs and Housing. • Both government and non-governmental bodies involved • Plan reviewed every ten years • Municipalities have role – must ensure decisions and official plans conform with the Greenbelt Plan
Greatest Threat	• Highways and secondary roads • Infrastructure • Aggregate extraction • Water lines
Recent Activity	Ontario government has worked to prevent planned or proposed development in a number of sensitive areas in the Greenbelt. During the October 4, 2007 Provincial election, the four main parties stated they were in favor of the Greenbelt.
Bottom Line	Best legal protection of those greenbelts studied and the largest Greenbelt in the world. It measures 11 times the size of the City of Toronto and is larger than Prince Edward Island.

Table 3 - London, UK Green Belt – Established 1938

Area	497,790 hectares, 1.2 million acres
Main Objectives/Vision	• Provide opportunities for access to open countryside for urban populations • Provide opportunities for outdoor sport and recreation near urban areas • Retain attractive landscapes and enhance landscapes near to where people live • Improve damaged and derelict land around towns • Secure nature conservation interest • Retain land in agricultural, forestry and related uses

Agricultural Features	• 82% of London Green Belt is agricultural land • Open farmland on heavy clay soil • Pasture lands • Large intensively-farmed fields • Small and medium sized farm fields in a rolling lowland and clay vale
Natural Features	• Major rivers flowing through broad valleys • Tree belts and woodland areas • Chalk downland with steep chalk cliff and high quality grassland • Heaths and coniferous forests • Thames floodplain
Governance	• Originally established by London and Home Counties (Green Belt) Act, 1938, they implemented the green belt policy adopted by the Greater London Regional Planning Committee in 1935. • The Town and Country Planning Act, 1947 • The London Green Belt Council is a volunteer body created by government in 1954 to review and provide advice on London's Green Belt • New green belts put in place beginning in 1955 • Department for Communities and Local Government holds primary responsibility for guiding planning policy including green belt policy as well as the Department for Environment, Food and Rural Affairs (Defra) • Local municipal councils also play role - Greater London Authority • Local planning officials make decisions on whether or not to allow development in green belt
Greatest Threat	• Increasing pressure for housing • Highway expansion • Nearby airport • Neglected farms and struggle to protect agricultural land

Recent Activity	In December 2006, the government released the final report of the Barker Review of Land Use Planning. Their recommendations were to improve responsiveness, efficiency and transparency of the planning system in order to fulfil its potential. In May 2007, the UK government introduced a white paper on planning reform, Planning for a Sustainable Future – White Paper, to act on recommendations from the Barker report. Environmental groups in support of the green belt expressed concern of uncontrolled development. Since the release of the report, the Campaign to Protect Rural England has expressed concerns that green belts remain threatened in several regional plans across England despite assurances by the government that the Green Belt would be maintained and improved. CPRE also recently published a study of local food networks in East Suffolk linking people and businesses that grow, process, sell and buy food within a local region.
Bottom Line	Under a great deal of stress for housing development and the amount of land in the green belt is slowly declining.

Table 4 - German Green Belt – Established 1989

Area	17,700 hectares, 43,737 acres
Major Objectives/Vision	BUND/FoE Germany (Bund für Umwelt und Naturschutz Deutschland, Friends of the Earth Germany) has been engaged to protect the valuable habitats along the former inner-German border since the fall of the Iron Curtain in 1989. The vision of a Green Belt became the backbone of an ecological network and a symbol for trans-boundary co-operation in nature conservation and sustainable development. The Green Belt also aims to connect people and become a symbol showing that the enlarged European Union has not only a cultural but also a natural heritage.
Agricultural Features	German Green Belt was not set up for agricultural purposes.

Natural Features	• Many endangered species and habitats – meant to support natural heritage and tourism and recreation values • Includes or borders on 150 nature reserves • More than 600 endangered animals and plant species • 60% of Green Belt composed of aquatic ecosystems, different forest types and grasslands
Governance	There is no legal regime in place to protect the Iron Curtain Green Belt. The land in the Green Belt along the former Iron Curtain is protected through BUND land purchases and the Federal Nature Conservation Act (2002). BUND is closely involved with the expansion of the Green Belt.
Greatest Threat	• Agriculture – BUND claims ecological gems are squandered to create more unnecessary farmland
Recent Activity	There is strong support and momentum building to not just preserve land in Germany but to extend the protected land throughout Eastern Europe. The challenge in coming years will be continued public acceptance of policies and programs that provide strong protection for the green belt land, particularly in areas where there are development pressures.
Bottom Line	Cold War resulted in a unique natural heritage opportunity.

Table 5 - Netherlands Green Heart – Established 1958

Area	160,000 hectares, 395,368 acres
Major Objectives/Vision	• There should be recreation areas near great cities • Productive agricultural land should not be surrendered to urban uses • Water catchment areas and recreation areas should not be given over to urban uses
Agricultural Features	• Main focus on agriculture and tourism and recreation • Contains peat meadows, low polders, dunes and flood plains • In Randstad region, 80% of land used for range of agricultural activities including cultivating under glass, bulb growing and large-scale arable farming • Supports soil-based agriculture and dairy farming

Natural Features	• Highly scenic • Dykes, ditches, ponds • Three major landscapes are a river landscape, peat lands and drained lakes
Governance	Considered more of a planning concept than a legal entity, the Fourth Act on Spatial Development in the Netherlands gave the Green Heart the status of 'National Landscape' and a policy document was created to protect and promote the area's openness and landscape identity. The policy involves development of the landscape, development of nature and cultural values, and restriction of urban sprawl. Although strictly a planning policy, it is strongly supported by the Netherlands government. The Green Heart Platform is responsible for implementing policy relating to the Green Heart. It is made up of representatives of the four government ministries, the Randstad provinces, the four major cities in the Randstad ring, other municipalities, water boards and interest groups.
Greatest Threat	• Housing and development pressures on open spaces • Construction of new roads and railway lines • Recreational space is in short supply • Struggle to protect agricultural land
Recent Activity	A group of farmers recently launched an initiative to promote agriculture in the Green Heart opening shops to sell local products grown and made in the area. Unfortunately the Green Heart is being met with continued suburban community growth, loss of rural character and the further urbanization of cities and villages within the area.
Bottom Line	A country that has tried to protect more land and values space significantly.

Table 6 - Portland, Oregon Urban Growth Boundary – Established 1979

Area	102,953 hectares, 254,403 acres
Major Objectives/Vision	To protect farms and forests from urban sprawl and to promote the efficient use of land, public facilities and services inside the boundary as well as to promote development and re-development of buildings and land in the urban core to help the downtown thrive economically.

Agricultural Features	• Shares similar values with Ontario • Fertile agricultural land and forests; crops include nuts, berries, hops, wine grapes, mint, grass seed and nursery and landscape plants
Natural Features	• Parks and forests • Hiking trails
Governance	The Urban Growth Boundary was put in place as part of Oregon's statewide land use planning program implemented through Senate Bill 100 in May 1973. Afterwards, a number of initiatives were undertaken to weaken the Bill but they were defeated and the UGB was established in 1979. The UGB is managed by the Metro Council, which is an elected regional government with jurisdiction over 25 cities in three counties. It is responsible for policy making and operations in relation to the regional government's programs and functions. • UGB reviewed every five years • State and local governments work together - state lays out framework for protection and local governments are required to make planning decisions within that framework • Non-governmental organizations have a role, including the Audubon Society of Portland and 1000 Friends of Oregon
Greatest Threat	• Affordable housing • Development pressures despite a desire to combat urban sprawl and encourage sustainable transportation • Struggle to protect agricultural land
Recent Activity	Metro Council recently approved a major addition following a two-year process of determining how much new land was required to satisfy the need for housing and employment. The expansion initially added 18,638 acres into the UGB. However, there were appeals for more employment lands and the actual increase ended up being 17,808 acres. On top of this, local governments in the Portland region have developed programs to promote a regional food economy, including a network of farms participating in Community Supported Agriculture where consumers buy shares in a farm in return for a supply of produce and establishing a direct relationship with the farmer.
Bottom Line	Affordable housing overshadows the need to protect natural land making it hard to keep the designated land the size that it is.

Table 7 - British Columbia Agricultural Land Reserve – Established 1973

Area	289,755 hectares, 716,000 acres
Major Objectives/Vision	A provincial agricultural land reserve system capable of fostering economic, environmental and social sustainability. Goals include preserving agricultural land, encouraging and enabling farm businesses and considering community interests in the provincial land reserve system. The ALR was created specifically to protect agricultural land near cities and towns from urban sprawl.
Agricultural Features	• Agricultural land has deteriorated over time - quality of land included has not been as high as the land that has been excluded
Natural Features	• Plenty of wildlife habitat
Governance	The ALR was established when the NDP government implemented the 1973 Land Commission Act intended to preserve agricultural land and encourage the establishment and maintenance of farms. It was also intended to create parks, acquire greenbelts and assemble land for urban and industrial uses. The Land Commission Act was most recently replaced by the Agricultural Land Commission Act. The land designated as ALR land is part of a controlled agricultural land use zone. The Agricultural Land Commission (ALC), an independent body created by and accountable to the government, has the discretion to include or exclude land in the ALR. Local governments and private owners can make applications to the Commission to have land included or excluded. The ALC works with local governments, landowners, industry groups, local community groups and non-governmental organizations.
Greatest Threat	• Housing and development pressures • Concerns about sprawl and sustainable transportation and infrastructure • Struggle to protect agricultural land

Recent Activity	A 2006 report by the David Suzuki Foundation highlighted concerns and made recommendations for the ALR and the Commission. These included creating a revised annual service plan, the implementation of a more open and transparent application process for ALR removals, subdivisions and non-farm use and the recommendation that the provincial government must develop policies to support farms and farming practices that contribute to the health of communities and the environment. Overall, the ALR has slowed the rate at which prime farmland disappears due to development but it is still being removed at a fairly high rate and it is the most productive land that is being taken for development.
Bottom Line	The report created by the David Suzuki Foundation brought up substantial points and recommendations that need to be addressed in order for this green belt to thrive.

2

Legal and Governance Structures

London, UK Green Belt

The London Green Belt was initially established by the London and Home Counties (Green Belt) Act, 1938.[14] This legislation, passed by the British Conservative government, provided a legal mechanism to purchase green belt land around London to protect it from development, implementing the green belt policy adopted by the Greater London Regional Planning Committee in 1935.[15] This policy sought "to provide a reserve supply of public open spaces and of recreational areas and to establish a green belt or girdle of open space."[16]

The Town and Country Planning Act 1947[17] gave permission to local planning authorities to include proposals for green belts in their development plans.[18] New green belts were put in place beginning in 1955, after the UK government issued Green Belt Circular 42/55, inviting local authorities to protect green belt land and prevent sprawl from encroaching on countryside areas around cities and towns.[19]

The current government planning guidance related to green belts is provided in Planning Policy Guidance 2: Green Belts (PPG 2),[20] which describes the intentions of the policy, with the pri-

mary goal being the prevention of urban sprawl by keeping green belt land open permanently.[21]

German Iron Curtain Green Belt

There is no legal regime in place that specifically establishes or protects the Iron Curtain Green Belt. The land in the green belt along the former Iron Curtain is protected through land purchase resulting from the BUND initiative.

> In four areas along the Green Belt BUND is buying unique habitats from private owners – up to now around 210 ha. On the BUND-owned land implementation measures for protection and development of the Green Belt are carried out.[22]

The Federal Nature Conservation Act, a law that should help to promote the ecological network in the green belt, came into force in 2002. This act seeks conservation of native species of flora and fauna as well as their habitats, and preservation and regeneration of functioning ecological interactions.[23]

Netherlands Green Heart

The Green Heart seems to exist more as a planning concept than as a legal entity. However, the Fourth Act on Spatial Development in the Netherlands gave the Green Heart the status of 'National Landscape,' and with it a policy document created to protect and promote the area's openness and landscape identity. The policy involves development of the landscape, development of nature and cultural values, and restriction of urban sprawl.[24]

Protection of the Green Heart has greatly influenced policy choices concerning the location of new housing developments. It has led to the decision to locate housing by intensifying density in urban areas that already exist on the Randstad City Ring rather than building inside the Ring (due to the Green Heart) or outside the Ring (because of the potential for increased vehicles and congestion).[25]

The Green Heart remains a planning policy rather than a legal concept but continues to be strongly supported by the Netherlands government. The recent National Spatial Strategy, approved by the Netherlands Upper House in January 2006,[26] continues to strongly support the Green Heart and commits the central government to stay actively involved in developing the Green Heart and financing new development and necessary policy tools.[27] The Strategy sets out direction for development in the Green Heart:

> The development programme for the Green Heart will contain a system of quality zones to guide the improvement of landscape quality. This will clearly set out the types of development considered suitable and those considered unacceptable in each zone. For example, in transformation zones small-scale building development could make a contribution to strengthening the landscape structure. Large-scale urban development in the Green Heart is not acceptable under any circumstances.[28]

Portland, Oregon Urban Growth Boundary

The urban growth boundary was put in place as part of Oregon's statewide land use planning program first implemented through Senate Bill 100[29] in May 1973. The Governor of Oregon pushed for this initiative in response to concerns about "sagebrush subdivision, coastal condo mania, and the ravenous rampages of suburbia."[30] Over the following years, a number of initiatives to repeal or weaken Senate Bill 100 were defeated.[31] Portland's UGB was initially established in 1979.[32]

The UGB was first established in Oregon under a Republican governor. Since, the governorship has passed between Democrats and Republicans, although all have been Democrats since 1987.[33] Tom McCall, the Republican governor who pushed for the introduction of the UGB, "forged a broad-based coalition to address the consequences of rapid development, growing population, and ecological changes in the state."[34]

Oregon state law requires that an urban growth boundary be established around each metropolitan region or city in the state.[35] Outside the UGB, expansion of the urban area onto farm and forest land is not permitted. Land within the urban growth boundary may be used to develop housing and necessary urban services including "urban services such as roads, water and sewer systems, parks, schools and fire and police protection."[36]

A number of Oregon statutes apply to the UGB regime, including the Comprehensive Land Use Planning Coordination Statute,[37] the Local Government Planning Coordination Statute,[38] and the Organization and Government of Cities Statute.[39] In the Portland area, the UGB is managed for the region by the Metro Council, an elected regional government with jurisdiction over 25 cities in three counties.[40] The Council is responsible for policy-making and operations in relation to the regional government's programs and functions, [41] including reviewing the UGB every five years and, if necessary, expanding the boundary to meet a legal requirement that a 20-year supply of land be made to accommodate future residential development within the UGB.[42]

UGB expansions must only be considered where there is 'need', as defined by state law. Specific limitations apply even after a need for new land has been demonstrated. First, there must be an attempt to improve the capacity of land within the existing boundary. Then, non-agricultural land must be considered for urban expansion prior to farmland.[43]

Council has a number of land use planning powers granted by state law:

- Coordinating between regional and local comprehensive plans in adopting a regional urban growth boundary;
- Requiring consistency of local comprehensive plans with statewide and regional planning goals; and
- Planning for activities of metropolitan significance including (but not limited to) transportation, water quality, air quality and solid waste.[44]

As noted above, UGBs differ from greenbelts because they create a boundary between rural and urban land instead of encircling a parcel of land in which development is restricted. In Metropolitan Portland, the UGB currently encompasses about 400 square miles, or 256,360 acres (103,745 hectares), of land designated for urban use.[45]

Also, the intention is that UGBs will be reviewed and adjusted periodically. The most recent expansion of the Portland area's UGB occurred in December 2002, when the Metro Council ap-

proved a major addition following a two-year process to determine how much new land was required to satisfy the need for housing and employment.[46] This decision initially added 18,638 acres (7,543 hectares) into the UGB, 2,851 acres (1,154 hectares) of that to be used for employment lands. However, after hearing several consolidated appeals challenging the amount of the expansion, Oregon's Court of Appeals upheld the addition of 17,808 acres (7,200 hectares), 96 per cent of the land Metro had approved.[47]

British Columbia Agricultural Land Reserve

The Agricultural Land Reserve (ALR) was legally established when the NDP government headed by Premier David Barrett implemented the 1973 Land Commission Act.[48] This Act was intended primarily "to preserve agricultural land and encourage the establishment and maintenance of farms. Secondary objectives were to create parks, acquire greenbelts and assemble land for urban and industrial uses."[49]

The Land Commission Act was subsequently replaced with successive legislation. The most recent version, the Agricultural Land Commission Act,[50] came into force in November 2002 in place of several previous acts.[51] The Agricultural Land Reserve Use, Subdivision and Procedure Regulation[52] is a new regulation made under the Agricultural Land Commission Act that replaced existing regulations under the repealed acts.[53]

The land that is designated as part of the ALR is part of a controlled agricultural land use zone.[54] The Agricultural Land Commission established by the Act has the discretion to include or exclude agricultural land in the ALR.[55] Local governments and private owners must make an application to the Commission if they want land to be included in or excluded from the ALR.[56]

The Agricultural Land Commission Act restricts non-farm uses and subdivisions of agricultural land in the ALR except where they are allowed by the Act, regulations or an order of the Commission.[57] The Commission has also produced a number of policies that provide guidance on permitted uses in the ALR and activities that have been designated as farm use among other topics.[58]

Ontario Greenbelt

The legal structure for the Ontario Greenbelt is found in the Greenbelt Act, 2005.[59] This law was enacted in February 2005 following extensive public consultation during a moratorium on development in a Greenbelt study area that was put in place under prior legislation in December 2003.[60] During the election earlier in 2003, the newly elected Liberal provincial government had promised to create a greenbelt area in the Greater Golden Horseshoe.[61]

The Greenbelt Act gives the provincial Cabinet the authority to establish a Greenbelt Plan, which requires that local official plans be brought into conformity with the Greenbelt Plan, and establishes a Greenbelt Council to give advice to the Minister of Municipal Affairs and Housing.[62] The Act sets out an ambitious set of objectives for the Greenbelt Plan:

- To establish a network of countryside and open space areas which supports the Oak Ridges Moraine and the Niagara Escarpment;
- To sustain the countryside, rural and small towns and contribute to the economic viability of farming communities;

- To preserve agricultural land as a continuing commercial source of food and employment;
- To recognize the critical importance of the agriculture sector to the regional economy;
- To provide protection to the land base needed to maintain, restore and improve the ecological and hydrological functions of the Greenbelt area;
- To promote connections between lakes and the Oak Ridges Moraine and Niagara Escarpment;
- To provide open space and recreational, tourism and cultural heritage opportunities to support the social needs of a rapidly expanding and increasingly urbanized population;
- To promote linkages between ecosystems and provincial parks or public lands;
- To control urbanization of the lands to which the Greenbelt Plan applies;
- To ensure that the development of transportation and infrastructure proceeds in an environmentally sensitive manner; and
- To promote sustainable resource use.[63]

The Greenbelt Plan sets out a vision of a broad band of permanently protected land which: protects against the loss and fragmentation of the agricultural land base and supports agriculture as the predominant land use; gives permanent protection to the natural heritage and water resource systems that sustain ecological and human health and that form the environmental framework around which major urbanization in south-central Ontario will be organized; and provides for a diverse range of economic and social activities associated with rural communities, agriculture, tourism, recreation and resource uses.[64]

3

Distinctive Features

London, UK Green Belt

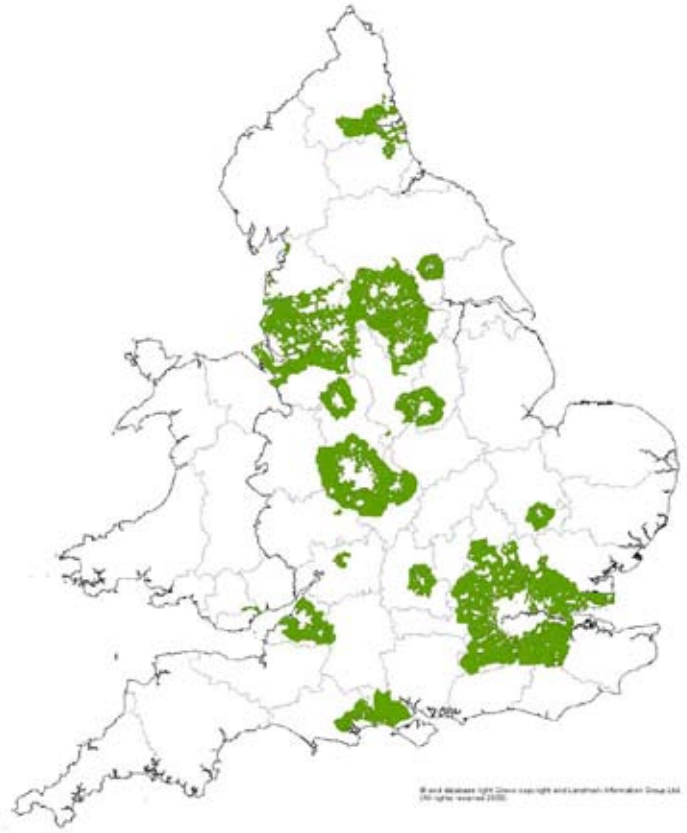
The initial idea for a 'green girdle' around the City of London originated with Raymond Unwin, a technical advisor to the Greater London Regional Planning Committee, in 1933. The purpose of this narrow green belt was not to prevent urban sprawl but to provide the open space for recreation that was lacking within the city.[65]

The Greater London Regional Planning Committee made the policy decision to create the London Green Belt in 1935[66] and legislation enabling it was passed in 1938.[67] The London Green Belt was implemented in 1945 at approximately two fifths of its current size.[68]

The London Green Belt is very large, although different sources offer different statistics as to its exact size. For example the 1997 statistics for the London Green Belt, published by the UK government in 2000, put the area of designated green belt land at 514,300 hectares, excluding metropolitan open land.[69] In a 2005 publication by the Campaign to Protect Rural England to commemorate the 50th anniversary of the UK's green belts, the size of the London Green Belt is given as approximately 497,790 hectares. Regardless of its exact area, London's Green Belt is by far the

largest of the various municipal green belts in the UK.[70]

Figure 2 - Greenbelts in England



Map Courtesy of the Campaign to Protect Rural England (CPRE) www.cpre.org.uk/
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The extensive green belt region around London is composed of a number of diverse landforms, including: the North Thames Basin, covering a large area around North London; the Greater Thames Estuary, which follows the Thames flowing to the east; the North Kent Plain southeast of Central London; the Thames Basin Lowlands to the southwest; the Thames Valley to the west; the North Downs to the south; and the Thames Basin Heaths which is further south.[71]

The different regions that make up the London Green Belt contain a wide variety of natural features, including the following:

- Major rivers flowing through broad valleys;
- Tree belts and woodland areas, many on hillsides and hilltops;
- Corridors containing motorways, rail lines and electricity pylons;
- A variety of agricultural landscapes including: open farmland on heavy clay soil; pasture lands; large intensively-farmed fields; and small and medium sized farm fields in a rolling lowland clay vale;
- Chalk downland with a steep south-facing chalk cliff and high quality grassland

- Heaths and coniferous forests; and
- Thames floodplain.[72]

Roughly 82 per cent of the London Green Belt is agricultural land, composed of 49 per cent managed grass and 33 per cent tilled land; and 7 per cent is forested, 1 per cent of which is coniferous and 6 per cent deciduous. About 9 per cent of the land in the green belt is suburban. Approximately 5.2 million people live in the green belt. Some urban development has occurred very slowly within the green belt but it has not been significant.[73]

The UK government's English Nature agency has sub-divided England into Natural Areas with unique identities due to the interplay of wildlife, landform geology, land use and human impacts. A number of these Natural Areas containing important habitats exist within the London Green Belt region, including: ancient parkland with veteran trees, ancient woodlands, lowland heath, grazing marshland, chalk grassland and scrub, cliff and chalk quarries, inter-tidal sand and mud flats, and arable farmland.[74]

In 1943, the County of London Plan articulated two central objectives in relation to the London Green Belt. These were to restrict urban growth and provide recreation as a primary use of the land.[75]

PPG 2 articulates five purposes for designating land as green belts, as well as six separate objectives for the use of land that has been defined as green belt land. The five purposes of including land in a green belt are:

- To check the unrestricted sprawl of large built-up areas;
- To prevent neighbouring towns from merging into one another;
- To assist in safeguarding the countryside from encroachment;
- To preserve the setting and special character of historic towns; and
- To assist in urban regeneration, by encouraging the recycling of derelict and other urban land.[76]

The objectives that apply to the use of land once it has been designated as within the green belt are as follows:

- To provide opportunities for access to the open countryside for the urban population;
- To provide opportunities for outdoor sport and outdoor recreation near urban areas;
- To retain attractive landscapes, and enhance landscapes, near to where people live;
- To improve damaged and derelict land around towns;
- To secure nature conservation interest; and
- To retain land in agricultural, forestry and related uses.[77]

PPG 2 specifically notes that the "extent to which the use of land fulfils these objectives is however not itself a material factor in the inclusion of land within a green belt, or in its continued protection."[78] Although green belts may contain high quality, attractive landscapes, this is not a relevant factor in deciding whether or not to protect land in a green belt. Thus the purposes for including land in green belts take precedence over the objectives for land use.[79]

Although the London Green Belt is largely composed of open agricultural, wooded and recreational areas, it also contains some urban development.[80] The growth in urban areas bordering and within the green belt have led to changes in rural areas as described here:

> For centuries, farming has shaped the physical character, economy and culture of rural areas – with farmers often being described as the 'custodians of the land'. In recent years, pressures at the urban fringe have caused farming activity to become detached physically, economically and culturally from the urban population.[81]

At the same time, rural and urban residents are interconnected in many respects. Those who live in rural areas use services available in urban centres, while urban residents require the products that are generated in the rural regions.[82]

Farmers in the 'urban fringe' – rural areas proximate to urban regions – face the usual challenges for those in agriculture, such as low market prices and outbreaks of animal diseases. In addition, urban fringe farmers must contend with other problems, including: vandalism and poaching; development pressure; high land prices and competition from other incompatible land uses; and the loss of local infrastructure supporting agriculture such as veterinarians and abbatoirs.[83]

Although farming located near large numbers of people could be seen as an advantage, this is often not the case. Farming in the rural areas near the urban fringe is structurally weak relative to the broader industry, even where land is of high quality and close to large urban markets.

> In many urban fringe areas, high quality land is conserved with little or no positive attention being given to the ability of that land to contribute either currently, or in the future, to levels or types of production commensurate with its inherent capabilities. The ability of farmers to adopt new crops or new flexible methods of production on the most favourable resource base is, therefore, often constrained by insensitive patterns of land use or urban social behaviour.[84]

German Iron Curtain Green Belt

Anywhere from 50 to 200 metres wide,[85] the Iron Curtain Green Belt runs for 1,393 kilometers through Germany with borders from Saxony, Bavaria and the Czech Republic to the Baltic Sea. The green belt includes or borders on 150 nature reserves extending the habitat network within it from 43,628 acres (17,656 hectares) to 551,566 acres (223,211 hectares), or 2,232 square kilometers.[86] More than 200 nature reserves protected by statute, are designated or planned to be within the green belt area.[87]

Because of its linear nature, the Iron Curtain Green Belt includes examples of almost all types of German landscape such as coastal areas, lowlands and low mountains. The green belt also connects these habitats to one another, which is "extremely rare in the intensively used and fragmented German landscape… Fallow grassland, shrubland, dry grassland, pioneer forest, wet meadows, water bodies and bogs are linked and interlinked."[88]

A survey of habitat types along the entire green belt was undertaken from April 2001 to September 2002.

The results of the survey reveal the great importance of this 177 km² large alignment of valuable habitats. Within its area 109 different habitat types were mapped. Summarised, 60% of the Green Belt are composed of aquatic ecosystems, different forest-types, extensively used mesophilic grassland, unused grassland (fallow) and species rich moist grassland (Figure 3). Half of the area (48%) of this habitat network consists of endangered habitat types…. About 16% of the area of the Green Belt Germany is covered by priority Annex I habitats (EU Habitats Directive 92/43/EWG).[89]

Figure 3 - German Iron Curtain Green Belt

Map Courtesy of BUND group (Bund für Umwelt und Naturschutz Deutschland) www.bund.net/

In a 24-hour period in 2003, 500 experts were able to map more than 5,200 species of plants and animals in the green belt, including some that had been thought to be extinct.[90]

The Iron Curtain Green Belt is seen "not only as Germany's first nationwide nature conservation project but also a living memorial to recent German history."[91] The Green Belt is intended to protect a system of interconnected habitats, 85 per cent of which currently remains intact ecologically. Intensive agriculture of arable land is seen as one of the threats from which the green belt must be protected; approximately 4,816 acres (1,949 hectares) of the green belt are "impaired by

agriculture."[92] Other concerns include the roughly 450 roads that cross the green belt and break up its connectivity, industrial parks that exist in the green belt, and reforestation using non-indigenous species.[93]

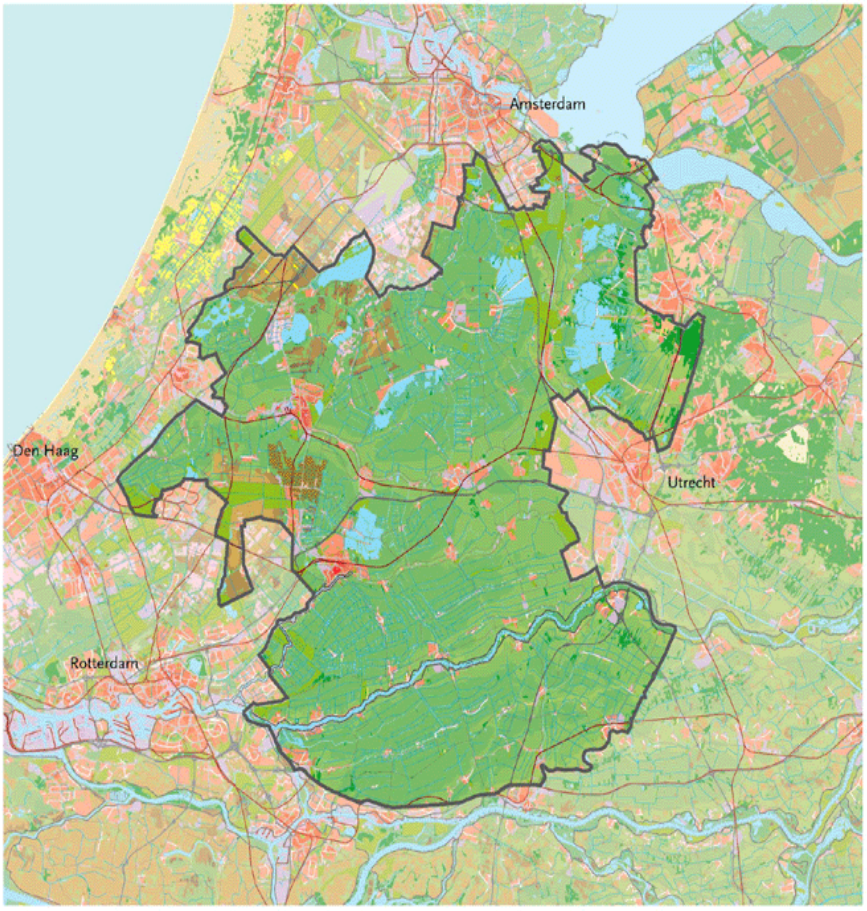
In Germany, where landscapes have been used intensively, the green belt is frequently the only land base left in a natural condition, making it valuable despite its narrowness and gaps. Although the green belt covers areas that are in very poor condition, there is potential to create a national ecological network.[94]

Netherlands Green Heart

The Netherlands Ministry of Housing, Spatial Planning and the Environment, National Spatial Strategy contemplates designating different quality zones allowing for different types of development. Some zones would only permit 'green/blue' development with restrictions on construction while others would allow development of fragmented or devalued areas. This quality-based zoning system will focus particularly on supporting agriculture.[95]

The four Western Netherlands cities of Rotterdam, The Hague, Amsterdam and Utrecht form a horseshoe shape referred to as the Randstad City Ring. Within this ring is the Green Heart and together the Green Heart and the City Ring make up the Randstad area.[96] The Green Heart area is approximately 1,600 square kilometers in size.[97]

Figure 4 - Netherlands Green Heart



Map Courtesy of www.groene-hart.nl/

Historically the Green Heart was a peat bog; it was not even inhabitable until the middle of the sixteenth century.[98] The Randstad area is now an agricultural landscape containing peat meadows, low polders, dunes and flood plains. It is highly scenic and features dykes, ditches and ponds.[99] The three main landscapes are a river landscape, peat lands and drained lakes.[100]

In the Randstad region, 80 per cent of the land continues to be used for a diverse range of agriculture, including cultivation under glass in the west, bulb production in the north and large-scale arable farming in the south. The Green Heart is a central open agricultural area in the Randstad that supports soil-based agriculture and dairy farming.[101]

The concept of the Green Heart was strongly influenced by a number of planning principles, including the following:

- There should be recreation areas near great cities;
- Productive agricultural land should not be surrendered to urban uses; and
- Water catchment areas and recreation areas also should not be given over to urban uses.[102]

The Working Commission envisioned the Randstad as,

> A horseshoe-shaped pattern of urban settlements arrayed around the Green Heart. This area was the economic core of the country. In the Green Heart, however, priority went to agriculture and recreation. Last but not least the Green Heart would serve as a strategic reserve to cater to future needs.[103]

The Green Heart is unusual among green belts in that it is surrounded by a ring of significant urban areas but is not attached to one primary city. The cities that comprise the Randstad,

> Jealously guarded against any one of them becoming dominant and this is still a theme in Dutch politics. The Randstad concept owes its appeal to the fact that, by containing urban development on the rim, it preserves not only this balance, but also what is perceived as a unique amenity, the Green Heart.[104]

In the National Spatial Strategy, the government recognizes the link between the Green Heart and the urban areas that make up the Randstad, "the political, administrative, social and cultural heart and the most important economic motor of the Netherlands."[105] The Strategy recognizes that one way to contribute to the goal of strengthening the Randstad's competitive position internationally is to develop the Green Heart's vitality and unusual qualities. The Green Heart landscape quality needs to be improved.[106]

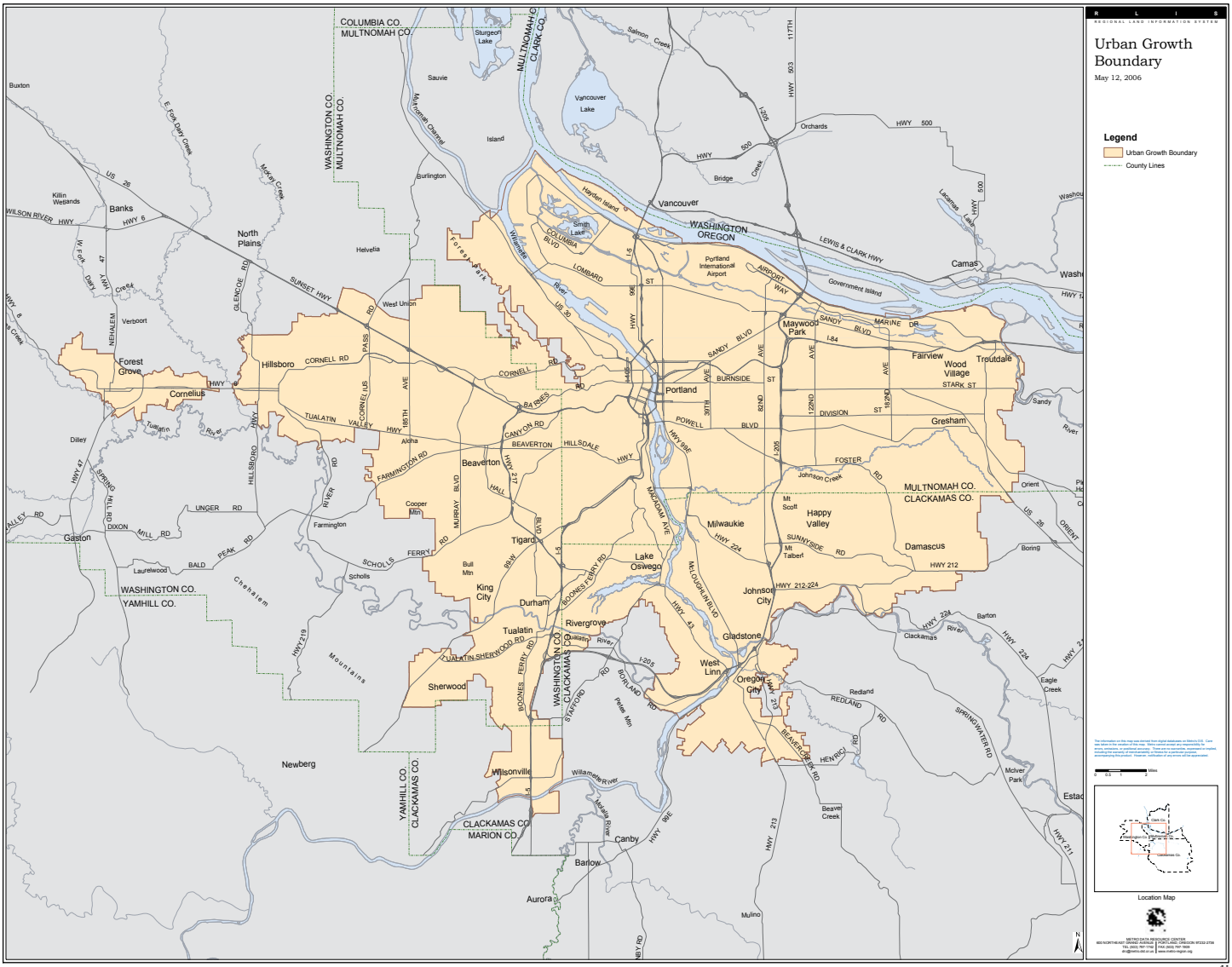
Portland, Oregon Urban Growth Boundary

The Portland region is located in the Willamette Valley, an area that has been described as "Eden's Gate."[107] The Willamette Valley has fertile agricultural land and forests. A range of crops are grown in the area, including nuts, berries, hops, wine grapes, mint, grass seed and nursery and landscape plants.[108]

The main function of the UGB is "to protect farms and forests from urban sprawl and to promote the efficient use of land, public facilities and services inside the boundary."[109] The boundary also serves to promote development and re-development of buildings and land in the urban core to help the downtown thrive economically. It makes decisions about locating infrastructure like roads and sewers needed for further development more predictable. As well, the limit to urban growth assists efficiency in deciding how infrastructure should be built because money can be focused on public transit and existing roads, as opposed to extending roads into new areas.[110]

UGBs were created to manage the urban-rural relationship and to "provide for an orderly and efficient transition from rural to urban land use."[111] Goal 14: Urbanization of Oregon's Statewide Planning Goals & Guidelines, emphasizes the importance of a clear separation between urban and rural lands, directing that cities and regional governments use UGBs to provide land needed for urban development, but also to identify and separate urban land from rural land.[112]

Figure 5 - Portland, Oregon Urban Growth Boundary



Map Courtesy of Portland, Oregon Metro Regional Government www.metro-region.org/

A recent study found that Portland area residents value the role of the UGB in protecting farmland and containing urban sprawl:

> The UGB does effectively stop the spread of subdivisions outside the boundary and Land Conservation and Development Commission policies severely restrict further parcelization of existing rural lots. Therefore, policies are in place to protect rural landscapes, but because the UGB creates such a dramatic interface it contributes to a sense of problem expressed by both rural and urban residents. Residents of both urban and rural areas were also strongly supportive of two mechanisms that would mitigate the sharp boundary: greenbelts and large lot transition zones.[113]

British Columbia Agricultural Land Reserve

When the ALR was created in the mid-1970s, it was made up of approximately 11.6 million acres (4.7 million hectares) of agricultural land. This represented about 5 per cent of the entire province. Although the boundaries of the ALR have been adjusted over its existence, its total area has remained about the same.[114]

Despite the consistency in total area, the quality of the agricultural land within the ALR has declined over time. The quality of the land included in the ALR is not as high as the land that has been excluded. In fact, for every hectare of prime agricultural land added in the ALR over the years, 2.8 hectares were removed. About 90 per cent of the land included in the ALR has been in the northern areas of BC while roughly 72 per cent of the land excluded has been in the south.[115] The northern farmland is less productive, and the land lost in the south has been prime agricultural land.[116]

The ALR contains public and private lands that may be farmed, forested or vacant.[117] The natural features of these areas are quite diverse as they extend across BC in both northern regions of the province and southern agricultural regions such as the Lower Mainland, Thompson-Okanagan and southern Vancouver Island.[118]

While all of the land included in the ALR is potentially suitable for agricultural use, it is not all equally productive. Some land bases produce agricultural products more capably than others depending on factors such as climate, which affects heat, moisture and topography, including soil quality. BC uses a land classification system that categorizes farmland according to seven land capability classes depending on how many limitations to productivity exist in an area and what special management practices may be needed.[119] High quality, productive farmland that produces a broad variety of foods also helps to support biodiversity and protect habitats for wildlife.[120]

The vision of the Agricultural Land Commission is of a provincial agricultural land reserve system capable of fostering economic, environmental and social sustainability. The goals of the Commission include: preserving agricultural land; encouraging and enabling farm businesses; and considering community interests in the provincial land reserve system.[121]

Working agricultural lands are important to rural and near-urban economies.[122] The ALR has been valuable in the growth of the BC economy, especially for rural regions that have experienced declines in resource sectors. Sales from BC farms increased from $1.3 billion in 1992 to over $2.2 billion in 2001 and employed from 26,000 to 33,000 people steadily over this period. Related businesses that process, transport, store, distribute and sell BC farm products add $6 billion each year to BC's economy and provide about 260,000 jobs. The ALR also supports other economic activities that

are viewed as compatible with agriculture, including tourism and recreation, oil and gas exploration and production, gravel extraction, food processing, equestrian facilities, and wineries.[123]

The ALR was created specifically to protect agricultural land near cities and towns from urban sprawl. As such, the relationship between BC's urban centres and the ALR is a close one. A number of benefits have been noted as a result of this proximity:

> It puts farms close to their marketplace and their labour force. It encourages good land stewardship, provides wildlife habitat and can help mitigate the damage that humans inflict on their environment. It enhances food security, which faces increased pressure from population growth, the erosion of agricultural land elsewhere, rising transportation costs, and potential calamities ranging from pandemic disease to climate change.[124]

Members of the public, most of whom are located in urban areas,[125] overwhelmingly support the protection provided by the ALR. A 1997 survey found that 90 per cent of BC residents believed the government should limit urban development to protect farmland and 72 per cent felt that removing land from the ALR should be difficult or very difficult.[126]

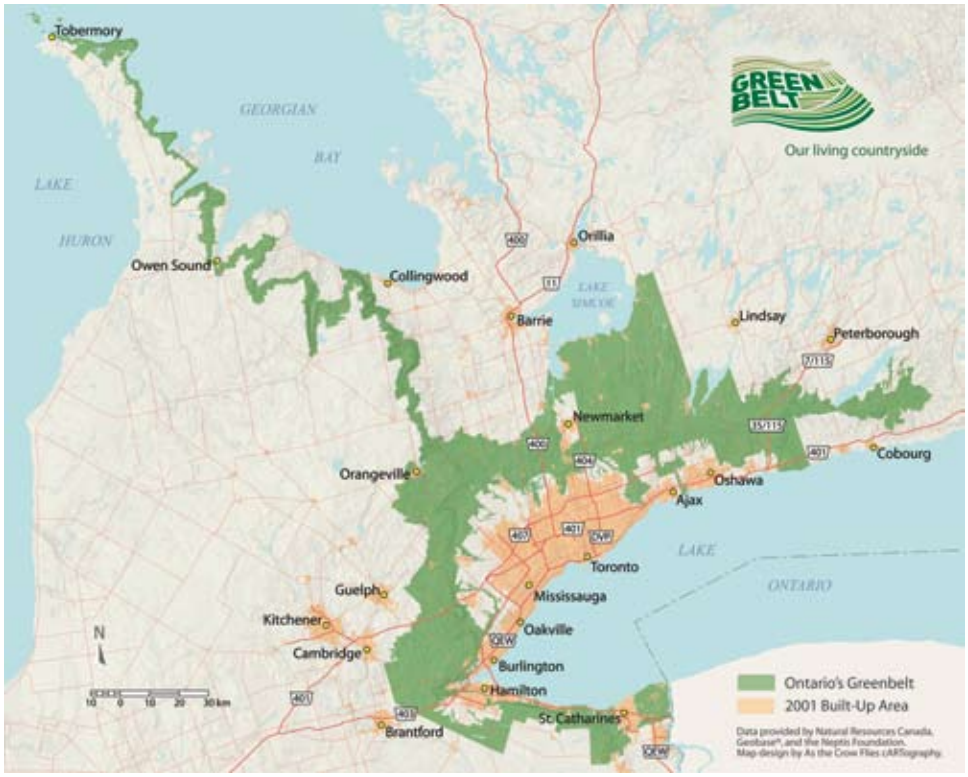
Figure 6 - British Columbia Agricultural Land Reserve

Map Courtesy of the British Columbia Provincial Agricultural Land Commission www.alc.gov.bc.ca/

Ontario Greenbelt

Created in February 2005, the Ontario Greenbelt is made up of 1.8 million acres (728,000 hectares) of land in the Golden Horseshoe around Toronto, and includes 800,000 acres (323,000 hectares) of land that are also protected by the Niagara Escarpment Plan and the Oak Ridges Moraine Conservation Plan. It is larger than Prince Edward Island. The Greenbelt was established to safeguard the quality of life in the Golden Horseshoe in anticipation of continuing population growth and urbanization. The population in the area is expected to increase by approximately 4 million to a total of about 11 million people by 2031.[127] A greenbelt was seen as necessary to combat the prospect of further urban sprawl, environmental decline, and a loss of greenspace and farmland to development.[128]

Figure 7 - Ontario Greenbelt



The Greenbelt's boundaries are defined by a systems approach to land use planning and include the Natural Heritage System, the Agricultural System and Settlement Areas.[129]

The Natural Heritage System includes natural-heritage and water-resource systems needed to maintain biological and geological diversity, natural functions, and indigenous species and ecosystems. The Agricultural System is made up of prime agricultural land, specialty-crop land and other rural areas throughout the Golden Horseshoe that face the threat of urbanization. Settlement Areas in the Protected Countryside include land that is designated as towns, villages and hamlets.[130]

4

Greenbelt Stewards

London, UK Green Belt

There are a number of state actors from both levels of government involved in stewardship of the London Green Belt and other UK Green Belts. Within the UK government, the Department for Communities and Local Government has primary responsibility for guiding planning policy, including green belt policy. As well, the Department for Environment, Food and Rural Affairs (Defra) plays a role in protecting green belts. Defra was formed to represent within one government department the interests of farmers and the countryside, the environment and the rural economy, and concerns about food, air and water.[131]

Local municipal councils also play an important role in each region where green belts have been created. In the case of London, the municipal government is the Greater London Authority, a strategic citywide government, consisting of the directly elected Mayor of London and the separately elected London Assembly.[132] Local planning officials are responsible for making decisions on whether or not to allow development in the green belt.[133]

Environmental and countryside agencies sponsored by Defra, such as the Countryside Agen-

cy and English Nature, also play a role in green belt stewardship. The government established the Countryside Agency in 1999 to conserve and enhance England's countryside.[134] The mandate of the Countryside Agency is to develop and give advice on solutions and good practice related to the quality of the countryside with the goal of shaping policy and service delivery.[135] The Countryside Agency has produced reports such as The State and Potential of Agriculture in the Urban Fringe – Final Report,[136] and Urban Fringe – Policy, Regulatory and Literature Research.[137] English Nature, another Defra agency, promotes nature and green space conservation, and does work related to the green belts.[138]

The Campaign to Protect Rural England (CPRE) has actively worked on countryside issues for 80 years, including advocacy for the creation and strong protection of green belts.[139] CPRE also promotes local food and agriculture.[140] In the case of the London Green Belt, national organizations such as the CPRE and local groups participate in the London Green Belt Council, a voluntary body created by the government in 1954 to review and provide advice on London's Green Belt.[141]

Farmers are also seen as stewards of the London Green Belt as so much of it is made up of agricultural land.[142]

German Iron Curtain Green Belt

The BUND group (Bund für Umwelt und Naturschutz Deutschland[143]), one of Germany's leading environmental organisations and a member of Friends of the Earth, is closely involved in the protection of the valuable habitats along the Iron Curtain Green Belt. The BUND-Project Office Green Belt in Nuremburg is responsible for coordination of projects and activities along the German Green Belt and acts as regional coordinator of the Central European Green Belt.[144]

Other NGOs who have an interest in the German Green Belt, and are also involved with the expansion of the Green Belt concept throughout the former east-west border in Europe, include Euronatur[145] and IUCN – the World Conservation Union.[146]

Although the government has not given the German Green Belt legal status, it is actively engaged in protection efforts through the German Federal Agency for Nature Conservation (Bundesamt fur Naturschutz – BfN).[147] This agency has also played a role in attempting to extend the German Green Belt throughout Europe, and organized a conference to launch the Green Belt in Germany.[148]

Netherlands Green Heart

A number of state actors participate in the stewardship of the Green Heart. All of the cities and provinces that form the Randstad City Ring have a role to play. During the 1960s and 1970s, Holland experienced rapid economic growth and an increased demand for housing. As a result the cooperation of the Randstad cities and provinces was essential because although the national government defined limits on growth in the Green Heart, it relied on the provinces to implement this in their planning controls.[149] The Randstad municipalities and provinces have remained important partners in the stewardship of the Green Heart.

The Green Heart Platform is responsible for implementing policy relating to the Green Heart. It is made up of representatives of four government ministries, the Randstad provinces, the four major cities in the Randstad ring, other municipalities, water boards and interest groups.[150]

Portland, Oregon Urban Growth Boundary

The state and local governments are important actors working together for rural land stewardship within the UGB. The state has laid out a framework for protection and the local governments are required to make planning decisions within that framework. Thus, the role of regional and municipal governments is very important. One study has suggested that the landscape at the edge of Portland's UGB "reflects differences in how the counties have interpreted state laws, and variances granted to developers and individuals."[151]

Other actors who have a significant role in stewardship include non-governmental organizations such as the Audubon Society of Portland[152] and 1000 Friends of Oregon.[153] 1000 Friends of Oregon is a nonprofit organization created in 1975 that works in education, research and advocacy to defend and promote land use laws, policies and legal precedents.[154] This group partners with independent local and regional citizens' land use organizations to address specific UGBs.[155] 1000 Friends of Oregon also helped create Coalition for a Livable Future, an alliance of community groups in the Portland Region to engage in developing and implementing a long-term land use plan in Portland.[156]

British Columbia Agricultural Land Reserve

Along with the ALR, BC's Agricultural Land Commission was created in 1973. The purposes of the Commission are:

- To preserve agricultural land;
- To encourage farming on agricultural land in collaboration with other communities of interest; and
- To encourage local governments, first nations, the government and its agents to enable and accommodate farm use of agricultural land and uses compatible with agriculture in their plans, bylaws and policies.[157]

The Commission is made up of members who possess knowledge about agriculture, land use planning, local government or first nation government.[158] Prior to 2000, the provincial government appointed the members of the Commission, which functioned as a centralized provincial body. As of 2000, the government began to appoint members to regional panels and, in 2002, the Commission was structured so that six regional panels would consider land use applications from their respective regions.[159]

The Agricultural Land Commission is an independent body, although it is created by and accountable to the government and does conform broadly to government policy.[160] In carrying out its mandate to preserve agricultural lands and support farmers, the Commission works with others who have a stake in the ALR. This includes:

- Local governments, who are treated as partners in land use planning and in compliance and enforcement due to the Commission's limited resources;
- Landowners, who have a statutory right to make an application to have land included in or excluded from the ALR and to be notified of another's application;

- Industry groups such as the BC Cattlemen's Association[161], the BC Agriculture Council[162] and the Union of British Columbia Municipalities[163];[164]
- Local community groups such as Save Penticton's Agricultural Land from Division and Extinction (SPADE) in the Okanagan;[165] and
- Non-governmental organizations that have advocated for greater protection of the ALR such as Protect Our Greenbelt,[166] Smart Growth BC,[167] West Coast Environmental Law,[168] FarmFolk/CityFolk[169] and the David Suzuki Foundation.[170]

Formed in 2004 to increase public awareness of the ALR and to oppose major applications that threaten it,[171] the ALR Protection and Enhancement Committee (ALR-PEC) is working to make sure the existing laws and regulations protecting the ALR are enforced, and to advocate for new laws and regulations to ensure agriculture in BC[172] is sustainable. ALR-PEC has called for a moratorium on removing land from the ALR.[173]

Ontario Greenbelt

A number of government and non-government stakeholders are involved with stewardship of the Ontario Greenbelt. The Ontario government established the Greenbelt and the policies in the Greenbelt Plan, must conduct reviews of the Plan every ten years, and may propose amendments to it.[174] Provincial government officials must conform to the Plan when making land use planning decisions. Municipalities also have an integral role in protecting the Greenbelt as they must ensure that their decisions and official plans are in conformity with the Greenbelt Plan.[175]

In addition to creating government stewards, the Greenbelt Act calls for the appointment of a Greenbelt Council to advise the Minister on matters relating to the Act.[176] The Greenbelt Council includes members from different backgrounds with knowledge about and experience with greenbelt protection. The Council provides advice on issues such as the ongoing implementation of the Act and Plan, the development of performance measures to use in monitoring the Plan's effectiveness, proposals for amendments to the Greenbelt Plan, and the ten-year review of the Plan.[177]

Soon after passing the Greenbelt Act, the Ontario government announced the creation of the *Friends of the Greenbelt Foundation* in June 2005, and provided $25 million to support the *Foundation* in its operations and grant-making.[178] The *Foundation* is an independent, not-for-profit organization whose purpose is to foster the living countryside of the Greenbelt by nurturing and supporting activities that preserve the environmental and agricultural integrity of the Greenbelt.[179]

Other Ontario environmental non-governmental organizations were instrumental in advocating for a greenbelt in the Golden Horseshoe area, and continue to support and promote the Greenbelt. Most of these groups work together as a coalition called the Ontario Greenbelt Alliance.[180] This coalition serves as a steward of the Greenbelt by: taking on a watchdog function in relation to development pressures, particularly in Greenbelt areas that have important environmental functions and features; providing a Greenbelt-wide information network and exchange; promoting a sense of the Greenbelt's value to rural and urban communities; and advocating that the protected Greenbelt area be increased.[181]

5

Political Issues: Threats and Foes

London, UK Green Belt

The most significant threat facing the London Green Belt at present is increasing demand for housing. London and the areas that surround it require significant levels of new housing and there are frequent calls to locate it in the green belt. In recent years, green belt policy has been increasingly challenged by critics urging a review of the current planning system with a move to deregulation. Concerns relate to conflicts between housing policy and green belt policy that prevent towns and cities from being able to meet demands for local housing, resulting in long distance commuting from developments that leapfrog the green belt.[182]

Foes of the green belt have opposed the UK's green belt policy vigorously. The Adam Smith Institute published a study in April 2006 proposing that 3 per cent of farmland in the green belt land be converted to housing and woodland in England and Wales over ten years to create 950,000 houses and about 321,000 acres (130,000 hectares) of woodland.[183] The author of that study claimed the countryside as it exists is not attractive and that intensive agriculture in the green belt has threatened biodiversity of crops and has released chemicals into the environment.[184] A recent report from the

UK think tank Policy Exchange also states that the national green belt policy should be abolished and instead, local communities should be permitted to make their own decisions about planning and the environment.[185]

Even supporters of the Green Belt, such as the Town and Country Planning Association, have recently expressed some concerns about elements of the policy with respect to housing, suggesting that the roles, purposes and extent of green belts should be revisited where they inhibit sustainable development of urban areas or where they limit opportunities to reduce social exclusion.[186] Likewise, the Royal Town Planning Institute (RTPI), an organization promoting strong planning in the UK, has critiqued existing green belt policy, calling it "archaic"[187] and claiming that there are conflicting objectives when green belt policy is applied and that public perception of the purpose of green belts is not consistent with reality.[188] The RTPI has argued for a new green space policy that links urban density and public transit, encourages regeneration and protects open natural spaces.[189]

While the Thatcher Conservative government was in power in the 1980s and 1990s, central government policies tended to support market-led development and these priorities were evident in local planning policies. At the same time, the central government introduced financial cuts to local authorities and encouraged partnerships with private development interests. This was a change from expectations under previous governments that local planning authorities would encourage public participation and act in the public interest to ensure against excessive development and protect the environment. It has been noted that this situation did not change greatly under the Blair Labour government elected in 1997.[190]

Currently, it appears that the government may be willing to consider relaxing its green belt policy to permit new housing within green belt areas that have been protected. In December 2006, the government released the final report of the Barker Review of Land Use Planning that made "recommendations to improve the responsiveness, efficiency and transparency of the planning system so that it can fulfil its potential."[191] Headed by economist Kate Barker, the review produced a report recommending that

> [T]here is likely to be increased need for green belt reviews, both to ensure that the integrity of green belts is maintained where necessary and to ensure that the development that takes place in England is genuinely sustainable (with careful evaluation of the different environmental impacts of different patterns of development). The requirements of sustainable development suggest that some urban extensions and new settlements should take place clustered around transport corridors, or at the edge of urban areas. The policy framework should clearly allow for this. Given the high proportion of land that is green belt, limited and properly justified change of classification could be allowed without jeopardising the overall goals for which green belts are designed.[192]

In May 2007, the UK government introduced a white paper on planning reform, Planning for a Sustainable Future – White Paper, to act on recommendations from the Barker report.[193] Environmental groups that support the green belt had expressed concern that this may result in uncontrolled development, but the government has insisted that the review would not lead to "concreting over the green belt."[194] Since the release of the white paper, the Campaign to Protect Rural England (CPRE) has expressed concerns that green belts remain threatened in several regional plans across England despite assurances by the government that they would be maintained and improved.[195]

There are additional development threats to the Green Belt besides housing. Proposals are underway that would expand highways in the Green Belt, as well a nearby airport. With agriculture generating low income for farmers, some small farm properties have been used for horse grazing or held in hopes of the value rising, and as a result have been neglected. Other pressures that have detracted from the London Green Belt include: mineral extraction through gravel pits that are subsequently turned into landfills for waste disposal; and the development of sports facilities that compromise the landscape quality of the Green Belt.[196] It is possible to argue that green belts have in fact already been eroded by local planning authority decisions that have permitted excessive and inappropriate development.[197] CPRE claims that each year approximately 2,471 acres (1,000 hectares) of Green Belt land are lost to development that includes homes, roads, parking lots, universities, airports and sports centres.[198]

In response to concerns about inappropriate development, the UK government issued the Town and Country Planning (Green Belt) Direction 2005. This Direction sets out criteria to guide the Secretary of State in deciding where to call in proposed applications for development that may be inappropriate in order to allow public inquiry and make a determination as to whether the application may proceed.[199]

German Iron Curtain Green Belt

Agriculture is seen as the greatest threat to the Iron Curtain Green Belt. Despite the fact that a primary goal for establishing green belts in other jurisdictions has been to preserve agricultural land, proponents of the Iron Curtain Green Belt consider agricultural use to be contrary to the aims of protecting the green belt. One BfN/BUND publication claims:

> Time and again, areas which have lain fallow for decades are ploughed up or degraded by conversion into intensive grassland. Ecological gems are squandered to create more unnecessary farmland… While parts of the former border that run through forests are still basically well preserved, wherever it passes through open fields the Green Belt comes under greater threat.[200]

The Iron Curtain Green Belt is primarily valued for its tremendous ecological value and this is what the groups involved are seeking to preserve.[201]

The German state of Thuringia, which contains the largest section of the green belt, was initially thought to exhibit "greediness concerning agricultural land."[202] Following lobbying by the BUND and other NGOs, Thuringia gained a reputation as one of the states most committed to preserving the natural ecological network within the green belt.[203]

Foes of the preservation of an Iron Curtain Green Belt include former landowners who wish to reclaim their former properties in the border regions. The 1996 Border Property Law[204] that allowed former landowners in the border area to buy back their former land for 25 per cent of its current market value,[205] has hindered the ability of BUND to protect the land. About 20 per cent of the land in the green belt is privately owned, 13 per cent belongs to municipal or public authorities and 2 per cent is owned by NGOs, primarily BUND. The remaining 65 per cent is federally owned, and a federal government decision to sell this land posed a threat for green belt protection. In 2003, the German Minister of the Environment promised to transfer the federally owned land to the German

states at no cost for nature conservation. This mean that states on the former border would be able to use about 24,710 acres (10,000 hectares) for environmental purposes if they agreed to participate.[206] Unfortunately, this commitment has not yet been implemented due to new demands from the German Ministry of Finance and indecision on the part of some of the states.[207]

State governments along the German green belt, including Mecklenburg-Western Pomerania, Brandenburg, Saxony, Saxony-Anhalt, and Lower Saxony as well as Thuringia, have profited financially from real estate on the border under the Wall Land Act that provided that proceeds from such sales would be placed in a funding scheme to be distributed among the different states for investment in social, cultural and economic projects.[208]

Following national elections in 2005, Gerhard Schroeder's left-of-centre Social Democrat government was defeated. The current government, headed by chancellor Angela Merkel, is a coalition between the Social Democrats and the right-of-centre Christian Democrat party.[209] It is still early to identify the impacts of the new government on green belt policy.

Netherlands Green Heart

There is increasing pressure on housing and resources, including open space, in the Netherlands that may pose a threat to maintaining the Green Heart in the long term.[210] Analysis by the Dutch Geographical Society has suggested that:

- Over the last decades, the Green Heart is under attack from suburbanisation of larger and smaller cities;
- The Green Heart is also affected by the construction of new roads and railway lines. This infrastructure is built for tangential transport of an increasing volume of commuters;
- Several political concessions have been made to local development needs; and
- The space for recreation is in short supply in and around the Randstad. The Green Heart is barely used—with the exception of its lakes—as recreation area.[211]

Foes of the Green Heart have made numerous attacks on it:

- There is no whole, continuous physical landscape that could be called the Green Heart as there are a wide variety of landscapes in the region and it is broken up by infrastructure like highways and electric wires;
- The Green Heart does not have precise, marked boundaries except where it borders on major cities and the boundary mapped on plans does not reflect the landscape;
- Few parts of the Green Heart are truly 'green' in that only 3.8 per cent of the Green Heart may be defined as natural, recreational areas, as opposed to the national average of 14.8 per cent;
- Relatively speaking, the Green Heart is not very open because, although it is low density, there is a substantial amount of visible urban development that mean there is no sense of visual openness; and
- Randstad City Ring does not exist because those living there identify themselves as citizens of the cities in which they reside and not as citizens of the Ranstad.[212]

Some critics have gone so far as to claim that the Randstad and Green Heart are planning fictions and do not exist in reality, and that government policy should not be based on these concepts.[213] They have suggested that planners realize the Green Heart/City Ring is a fiction, but that "it is only because the Green Heart concept is fictional that the planners have the ability to use it to convey the more authoritative truths they wish to convey."[214]

Governments in the Netherlands are coalitions made up of several out of a number of possible political parties, often including the Christian Democratic Appeal (CDA): politically centrist and the most influential party since World War II. Other parties include the moderate and pragmatic Labour Party (PvdA) and others representing various left-of-centre and right-of-centre viewpoints, many of which have shared power at different points.[215] Following the most recent Dutch elections in November 2006, a coalition government has formed between the CDA, the PvdA, and a small religious party called the Christian Union. The coalition agreement reached includes large investments in the environment.[216]

Portland, Oregon Urban Growth Boundary

One of the main threats to urban growth boundaries in the Portland area is the pressure to accommodate a growing population and ensure that sufficient affordable housing is available. Foes of the UGB frequently criticize them for standing in the way of urban growth and affordable housing. Some suggest that,

> The scarcity of land for development that has been created by the "smart growth" policies has been cited as a principal reason that the Portland area experienced the greatest loss in housing affordability of any US metropolitan area between 1990 and 2000.[217]

A 1999 paper claimed that Portland is one of the 10 per cent least affordable housing markets in the United States, with more than 80,000 homes deemed 'unaffordable' to residents of Portland.[218]

Organizations such as the National Association of Home Builders (NAHB) have expressed similar objections to UGBs, urging against their use to restrict suburban development. The NAHB claims that UGBs have created housing that is not affordable:

> In the Portland example, as the region rose out of its long recession of the 1980s and growth accelerated during the 1990s, the UGB's restriction of the land market drove up costs substantially. While Portland was one of the most affordable housing markets in the country in the 1980s, it jumped to one of the most expensive housing markets.[219]

The NAHB also alleges that the high density housing envisioned by the UGB regime is hard to achieve because there is less market acceptance for it, and because neighbours often oppose such projects. The NAHB's website encourages opposition to any efforts to establish or promote UGBs.[220]

The significant expansion of the Portland UGB in 2002 was the result of a vigorous campaign on the part of real estate agents and home builders in the Portland metropolitan area suggesting that there was an affordable housing crisis by the UGB policy. Builders had purchased expensive

farmland along the UGB in anticipation that it would expand into the western suburbs.[221]

Others have refuted claims made by the NAHB by pointing out problems with the data relied on. For example, some of the NAHB rankings relied on census income figures that did not accurately reflect the jump in median household income in Portland during the early 2000s due to growth in the high-tech industry. This high-tech boom also contributed to an increase in the price of housing. Recent figures indicate that overall, US metro areas have a median household income of $57,500 and a median house price of $225,000, compared to Portland where the median income is $67,900 and the median house price is $201,000.[222] It has also been noted that during the 1990s when housing prices were rising, houses were being renovated and restored and this resulted in increases in their value and more desirable neighbourhoods.[223]

In addition, an urban analyst has looked at changes in housing prices in Portland and a number of other metropolitan areas from 1980 to 2000 and found that Portland's UGB only had statistically significant effects on home prices during the first half of the 1990s and these effects were small. He determined that it was wrong to conclude that UGBs would inevitably cause housing prices to rise faster based on the experience in Portland.[224]

British Columbia Agricultural Land Reserve

The pressure of urban development led to the creation of the ALR in 1973 and it has continued to wax and wane as a political issue over time. The Commission expects that the pressure to release land to accommodate community growth will continue to increase in coming years.[225] Thus, urban development pressure continues to be a serious threat to the ALR. Foes of the ALR include developers who apply to remove agricultural land from the ALR, and provincial government policies that do not adequately protect and promote the economic potential of agricultural lands.

The Commission has been criticized recently for allowing applications for the removal of productive agricultural land from the ALR for development. New guidelines in the Commission's service plan now require that the community needs be considered in deciding whether or not to exclude land from the ALR. The recent restructuring of the Commission is intended to make it more responsive at a regional level. As well, the Commission has approved several contentious exclusion applications.[226]

A 2006 report by the David Suzuki Foundation highlighted these concerns and made a number of recommendations designed to address them:

- The Agricultural Land Commission Act and the Agricultural Land Commission's annual service plan must be revised to ensure they are consistent and clear in their commitment to protect agricultural land from other forms of development.
- The application process for ALR removals, subdivision, and non-farm use must be made more open, transparent, and accountable.
- The Agricultural Land Commission must move toward a more comprehensive regional planning process and consider 'community need' applications for removal only as part of a comprehensive review of ALR boundaries.
- The provincial government must undertake or facilitate authoritative research on a wide range of factors likely to impair the viability of farming now and in the future.
- The provincial government must develop policies to support farms and farming

practices that contribute to the health of communities and the environment.
- Municipalities and regional districts must plan to protect existing agricultural land as a permanent legacy for future generations.[227]

Some of the recent changes to the structure and functioning of the Commission were the result of provincial government deregulation initiatives. The current Agricultural Land Commission Act was introduced as part of this program of deregulation.[228] Beyond the changes already discussed, the new legislation also expands the oil and gas and mining activities that are permitted on agricultural land, and gave the Cabinet more authority to regulate permissible non-farm uses of agricultural land.[229]

One of the legislative mandates of the Agricultural Land Commission is to encourage and enable farm businesses. The Commission has struggled with how to fulfill this part of its mandate given that it is a regulatory land use agency and has limited financial resources. The Commission has therefore not been proactive in encouraging and enabling farm businesses directly because it lacks the capacity to do so. However, it has focused its activity in this area indirectly by working with local governments to remove barriers to farm businesses such as by-laws or community plans restricting agriculture.[230]

Other actors have suggested means to encourage and enable farm businesses. For example, the ALR Protection and Enhancement Committee has urged the provincial government to develop a strong provincial agri-food policy that commits to preserving farmland and ensuring a safe, secure food supply.[231]

In addition, a recent West Coast Environmental Law report proposes a number of potential tools, such as:

- Agricultural area plans to address issues including identifying opportunities and constraints faced by agriculture in a specific area, and promoting agriculture by increasing public awareness of its value to a region;
- Agri-tourism to supplement and diversify farm incomes and increase urban dwellers' appreciation of agricultural practices and concerns; and
- Farmers' markets to provide a regular local market for produce and provide a connection between farmers and urban consumers.[232]

Ontario Greenbelt

While there was generally strong support from stakeholders during legislative committee hearings prior to the enactment of the Greenbelt Act, a number of groups expressed specific concerns and in some cases opposition to the legislative and policy framework being introduced. These groups included the aggregate industry, the home building industry, developers, and some farmers and landowners in the Greenbelt region.[233]

In a first anniversary report card of the Greenbelt in February 2006, the Ontario Greenbelt Alliance evaluated the progress in implementing it. The report looked specifically at the ten most threatened sites within the Greenbelt and noted numerous threats in the Greenbelt area, including: a proposed large sewer extension requiring massive dewatering that could harm sensitive aquifers and environmental systems as well as bringing intensive urban development, contrary to the principles

of the Greenbelt; proposals for new quarries or quarry expansions in environmentally sensitive areas and natural heritage features; and a major residential and recreational development that threatens pristine forests, rare species and the headwaters of three significant cold-water streams.[234] The second anniversary report card, released in February 2007, conveyed further concerns about sensitive areas in the Greenbelt still needing better protection against proposed quarries, sewer pipes, roads and highways, and urban development. However, the report also noted a very high level of public support for the Greenbelt and commended the Ontario government for the measures it has taken to identify and protect parkland, and for its aggressive defense of areas against breaches of the Greenbelt Plan.[235]

The prospect of new highways and highway extensions also poses a threat to the new Greenbelt. The Ontario government is the proponent of a number of highway projects through the Greenbelt that are contrary to Greenbelt goals relating to the protection of green space and curbing urban sprawl insofar as highways promote driving over public transit use.[236]

6

Successes and Challenges

6.1 London, UK Green Belt

Farming and Food Issues

The UK green belts were not designed to assist in fostering a regional food economy, although some suggest that green belt designation reassures tenant farmers that their land will not be sold by the owner, and this stability makes it more likely that farmers will invest in long-term crops.[237]

Regardless of whether or not the London Green Belt was designed to promote a regional food economy, the proximity of green belt farms to a major city and towns facilitates access to local food. Farmers' markets, as well as ethnic and specialty markets, are increasing throughout London and offer personal contact between farmers and consumers. Farmers in the green belt may access support to pursue organic farming through Defra's Organic Farming Scheme. Also, farmers offer recreation and agri-tourism activities, and education about local food, by opening their farms to the public to showcase the land and their traditional farm practices.[238]

Agencies such as CPRE that are strong advocates of the green belt also promote local food, sustainable food production and connections between consumers and food producers. CPRE recently published a study of local food networks, or 'food webs' in East Suffolk that link people and businesses that grow, process, sell and buy food within a local region. The report noted threats posed to local food networks by large supermarkets, and called for planning and retail policies to support and help create local food webs throughout England.[239] Other initiatives to promote local food webs include a local produce directory website, www.Localfoodweb.co.uk, which provides consumers with a searchable directory of farm shops, specialty food retailers, farmers' markets and village stores and forum to exchange recommendations with other consumers.[240]

Tourism and Recreation Issues

The six objectives set out for the use of green belt land in PPG 2 have been met at least to some extent in the London Green Belt. The UK Countryside Agency tries to build networks of parks, woodlands and other green areas that form corridors between the town and the country to allow for informal recreation. While large areas of publicly accessible open space exist in the green belt, many are criticized for not being easily accessed by public transit, although this criticism should been seen within the context that the UK generally has been more aware of and proactive about providing accessibility through transit than many other jurisdictions.[241] Other barriers to access include: the presence of busy roads intersecting the London Green Belt; the perception that people of minority ethnic backgrounds are not welcome; and the lack or inadequacy of facilities such as restaurants and parking. The green belt also provides opportunities for outdoor sport and recreation, typically near the boundary with the urban population.[242] One way in which the London Green Belt has not fulfilled its full potential relates to accessibility in terms of physical access through public transport, walking and cycling routes, and in terms of economic and cultural barriers. There is relatively poor accessibility to public transport and access points are infrequent and not well located. Also, rights of way are often in poor conditions with numerous obstructions. This acts as a barrier to walking and cycling in the green belt.[243]

The lack of access by public transport contributes to economic barriers impeding access to the London Green Belt. Poor access by public transport mainly impacts those with lower incomes, making it difficult for them to visit the wider countryside. Another economic barrier results when fees are required to enter open space areas in the green belt such as golf courses and National Trust sites.[244]

A number of studies have found that ethnic minorities may feel stigmatized and uncomfortable in the 'British' countryside for a number of reasons, including a lack of information about the green belt, a lack of comfort and familiarity outside of urban areas, language barriers and other cultural factors. Some may also feel vulnerable to attack or harassment. Disabled users may also feel excluded when nothing is done to make the countryside more accessible to them.[245]

Natural Environment Issues

In relation to the conservation and enhancement of green belt landscapes, evidence shows that, except for an increase in woodland, the quality of the landscape in London's Green Belt generally deteriorated between 1949 and 1991. However there have been some significant landscape enhancement initiatives like the successful Community Forest program.[246]

There has been more effort to improve damaged and derelict land in the London Green Belt but this is often linked to removing an area of land from the green belt in exchange for funds to restore a wider area. For example a 100-hectare site that had been used for gravel extraction was restored and opened for public access as the result of an agreement to give up 50 acres (20 hectares) of land for commercial and industrial development. There are additional mechanisms, however, to assist in restoring damaged landscapes and habitats and expanding wilderness areas.[247] These include two Defra programs: Environmental Stewardship, which rewards farmers for effective environmental management of their land;[248] and the English Woodland Grant Scheme, which provides grants to help sustain and increase the benefits of existing woodlands and to help create new woodlands.[249] The CPRE has urged that in addition to such programs, long-term public funding should be made available to support landscape conservation work undertaken by farmers, recognizing that farming provides many public benefits that are not rewarded through sales of farm produce.[250]

Current Health of Greenbelt

Overall, green belts in the UK have been very successful. Because green belts have been in place in the UK for more than 40 years, they have had a profound effect on the landscape around urban areas, for the most part achieving their purposes of keeping the countryside open and preventing new development except for agriculture, forestry and recreation.[251] Because of the permanence and relatively rigid application of the green belt policy, it has achieved its main purpose of preventing development and maintaining an open countryside around urban areas.[252]

From a governance perspective, it has been advantageous to manage the green belts in terms of issues such as the environment and food and rural affairs in Defra. This helps to address the conflicts that may arise when environment, agriculture and rural needs are seen as competing. One of Defra's primary goals is to provide "more and better access to the natural environment for recreation, especially for those who find it difficult to enjoy the health and well-being benefits which access to nature can bring."[253] There are a wide variety of Defra programs and initiatives that include:

- Public access to the countryside through preservation of rights of way and information on conservation walks and rides;[254]
- Landscape protection and access opportunities through the management of National Parks and Areas of Outstanding Beauty;[255]
- Delivery of a Sustainable Farming and Food Strategy to assist the agricultural industry;[256]
- Programs offering financial support for farmers and land managers in providing public benefits such as a high quality, accessible countryside;[257] and
- Support for rural communities through access to affordable rural housing, investment in rural social enterprises and other programs.[258]

The London Green Belt was created in response to the unchecked and sprawling growth that took place in that city during the 1920s and 1930s. Had the green belt not been put into place, it is likely that the sprawl would have continued. Instead, the green belt has ensured that existing urban land has been used more efficiently, as well as preserving much of the countryside around the city.[259]

However, as discussed earlier in the paper, development pressures pose a threat to the London Green Belt, as well as other UK green belts. A February 2007 news release by the Campaign to Protect Rural England (CPRE) noted that,

> Green Belts have shrunk in most of England's regions since 2004, despite a pledge by the Deputy Prime Minister that they would grow in every region, and more recent reassurances by the Secretary of State for Communities and Local Government.[260]

The release quotes government figures showing that the total Green Belt area has shrunk in London and the South East, East Anglia, the North West and the East and West Midlands since 2004.[261]

The UK Chancellor and Deputy Prime Minister recently asked Kate Barker to conduct a review of land use planning to consider how planning policy and procedures could encourage economic growth and prosperity along with other sustainable development goals.[262] The Barker review final report, released in December 2006, acknowledges that the "success of green belts and other policies has been notable, and has produced a number of important benefits, including maintaining valued open space for recreation and preserving the intrinsic character of the English countryside."[263] Following the release of this report UK MP Ruth Kelly emphasized the government's response in a speech, noting that it:

> Remain[ed] committed to the principles of the Green Belt approach. Local authorities should continue to contain urban sprawl, assist urban regeneration and protect important green space.[264]

As noted by the CPRE, "[f]or Green Belts to fulfil their potential, development threats must be firmly resisted."[265] This has determined the success of the UK green belts thus far and will continue to be a critical factor in the future.

6.2 German Iron Curtain Green Belt

Farming and Food Issues

As noted above, agriculture is seen as a significant threat to the Iron Curtain Green Belt, and contrary to the aims of protecting the green belt.

Tourism and Recreation Issues

The Iron Curtain Green Belt is seen as a monument to overcoming the years of German division, and so the historical and cultural elements of the green belt are emphasized. Historical cycling tours are offered on the historical trails through this area.[266]

In 2005, the BUND Project Office Green Belt conducted a preliminary study called "Experience Green Belt" to explore the potential for further eco-tourism and sustainable development in the German Green Belt. The project, conducted from April to December 2005, aimed to develop a comprehensive marketing concept for the Green Belt consistent with its goal of nature conservation.[267]

Another interesting program which promotes the Green Belt and educates the public about it is called 'Experience the Green Belt.' Launched at the end of 2006, it allows school-aged children and adolescents to learn about the Green Belt by taking part in 4 to 6 weeks of activities. These activities will the students about the nature, history and culture of the German Green Belt regions and the students use their experience to create art that represents a theme related to the Green Belt.[268]

Natural Environment Issues

Because the primary mechanism to protect the land in the German Green Belt is land purchase, BUND buys property containing unique habitats from private owners. Once land is purchased, BUND undertakes measures to protect and develop the green belt land.[269] These activities are financed through the sale of Green Share Certificates:

> Any donor giving 65 Euro becomes a symbolic shareholder in the Green Belt and will be invited to guided excursions and other exclusive activities – the shareholder-meetings … – and regularly gets special information flyers. Up to now 8,500 people are shareholders of the Green Belt Germany and finance the land purchase as well as further activities, e.g. public relation, political lobby work, and implementation projects.[270]

Current Health of Greenbelt

Support for the Iron Curtain Green Belt is strong and the momentum in Germany to not just preserve it but to extend it throughout Eastern Europe is growing. Because this area was protected from development during the Cold War era,

> The border granted nature a 30-year pause for breath. And nature flourished as a result. What developed was something that has become extremely rare in our intensively used landscape: a truly wild area, with expansive fallow grasslands, idyllic shrublands and forests, swamps and heaths in bloom - a colourful mosaic of diverse habitats.[271]

The challenge in Germany in coming years will be to retain public support for policies and programs that can provide strong protection for the green belt land, particularly in areas where there are development pressures. The unique historical significance of this green belt will be instrumental in ensuring support for its continued protection, as many see "a green belt as a way to preserve the memory of the Wall, complemented by documentation stations and memorials."[272]

6.3 Netherlands Green Heart

Farming and Food Issues

The Netherlands' National Spatial Strategy, adopted recently, includes a vision for the future of agriculture and designates five 'greenports' as internationally significant horticultural areas. Four of these

greenports are in the Randstad area: Westland-Oostland, Aalsmeer, Bollenstreek and Boskoop.[273]

A group of farmers have launched an interesting initiative to promote agriculture in the Green Heart. In order to diversify their agricultural businesses, these farmers opened shops to sell local products grown and made in the area, calling the action Green Heart Products.[274] These products are marketed to alternative buyers, such as members of nature and environmental organizations, as opposed to a mainstream market.[275]

Current Health of Greenbelt

It does not seem that the Dutch Green Heart has reached its hoped-for potential as a protected green belt area, with continued suburban community growth, the loss of rural character, and the further urbanization of cities and villages.[276]

One author has argued that the Green Heart has failed due to "a dilemma between two contradicting functions of open spaces in a regional context: to be a separator of urban and rural areas and to be an integrator towards the Regional City of 'Greenbelt Metropolis'."[277] This analyst has suggested that,

> Areas for recreation and nature protection are in very short supply within the Green Heart. The "rurality" of the area is more fiction than fact. A functional shortcoming of the Green Heart approach is, that the landscape is hardly able to fulfil the functions of a pulsing "heart" of the Randstad. Protecting agricultural land during a period of overproduction and environmental pollution by farmers is nowadays a weak argument to restrict suburban development. Summarising it may be said that the main reason for deficits in protecting the Green Heart lay in the fact that the area in whole is not regarded as a spatial unity by people. The spatial form of the Green Heart is not derived from landscape qualities, but from a negative urban form.[278]

However there are others who have argued that the Randstad and Green Heart are real and have succeeded in important functions:

> There are still important values being pursued here. Among other things, this area is a classic Dutch poldered landscape, interspersed with small towns and villages. The aesthetic and recreational values are real and significant--the ANWB (the Dutch equivalent of the American Automobile Association), for instance, publishes a number of maps laying out bicycle trips in the Green Heart, and indeed many people do bicycle there! It is perhaps not as easy as it should be to get to the Green Heart from cities such as Leiden, but on balance it is amazingly accessible by bicycle, at least by American standards.[279]

To protect the Green Heart, three policies were promoted in the Netherlands:

- Imposition of restrictions on residential and industrial development in the area;
- Provision of alternate space for development in new towns and urban extensions outside the Green Heart; and

• Improvement of the quality of landscape and nature in the Green Heart.[280]

Although this approach of development restrictions succeeded for decades, it was opposed in the 1990s by forces favouring deregulation, decentralization and privatization. In recent years, financial support for landscape reconstruction, nature conservation and heritage protection has dropped and long-term policy concerning the Green Heart has been increasingly debated.[281]

A 2004 Dutch planning document entitled Nota Ruimte provides a glimpse of the future for the Green Heart as it promotes an approach that would allow the loss of "relatively small (and from conservationists' point of view less important) parts of the whole area, in order to better protect the remainder."[282] The new approach would:

- Redraw the present boundary of the Green Heart, leaving out certain areas that would be allowed to accommodate urban growth of a 'green' character;
- Allow towns and villages in the Green Heart more opportunities for development, that would be directed by provincial and local governments as opposed to the national government;
- Designate the Green Heart as a national landscape and make government funds available to improve the quality of its nature and landscape;
- Divide the Green Heart into three distinct areas – the peatland areas in the northwest and northeast, the riverland areas in the south and the central Lakeland areas.[283]

It remains to be seen whether or not relaxing restrictions on development, giving provincial and local governments a primary role in guiding that development, and investing government money in the quality of the landscape will ultimately improve and better protect the Green Heart. However, it is thought that,

> Dividing the Green Heart into manageable sub-areas (sometimes ironically dubbed the 'heart chambers' by policy makers), concentrating on the protection of the most vulnerable areas, has become national policy. Together with the redefining of the outer boundary, this sub-division suggests that Green Heart is becoming a more realistic concept, adapted to the needs and preferences of today.[284]

6.4 Portland, Oregon Urban Growth Boundary

Farming and Food Issues

Farmland advocates question the extent of the Portland UGB's effectiveness at protecting agricultural land.[285] Despite the UGB tool, 39 square miles, or 25,000 acres (10,117 hectares), of rural land was urbanized during the decade from 1980 to 1990, while the population grew by 146,000 people.[286] This increasing urbanization is consistent with the nature of the UGB system insofar as the boundaries must be periodically evaluated and expanded to ensure a 20-year land supply. In spite of expanding boundaries, the Portland area has lost less farmland than other city regions in the United States, even compared with other areas where farmland is protected.[287]

The rate at which Oregon has lost farmland has declined greatly since the introduction of the UGB planning requirements. Between 1959 and 1974, Oregon lost 2,994,853 acres (1,211,974 hectares) of farmland, but between 1974 and 1992 lost only 631,948 acres (255,740 hectares). In comparison with nearby states, Oregon lost 2.5 per cent of its farmland between 1978 and 1992 as opposed to 6 per cent in Washington, 8.4 per cent in Idaho and 11.5 per cent in California.[288]

Strong links have been made between the UGB and farmland preservation in Oregon. Other tools that are used to protect Oregon's agricultural land base include exclusive farm use zoning to prohibit land uses like subdivisions that are incompatible with commercial farming and preferential property tax assessment used by some counties to assess agricultural land at lower rates based on its value for farming and not for residential development.[289]

1000 Friends of Oregon cites a number of anecdotal examples of the success of UGBs in protecting agricultural land:

> Without the planning program, the Red Hills of Dundee—heart of Oregon's $45 million wine industry—would have been developed in acreage homesites; 4,000 acres of prime farmland on Sauvie Island would have been carved into 5-acre parcels; and destination resorts would have been built at the edge of the apple and pear orchards in both the Hood River Valley and the Rogue Valley, as well as next to world-class cropland in Jefferson County's North Unit Irrigation District. Of the 2 million acres in farm zones in the Willamette Valley, only 4,070 acres, or 2/10 of 1%, was lost between 1987 and 1999, either by being added to urban growth boundaries or by being rezoned from farm use to rural development. During the same period, the population of the valley increased by nearly 23%, to 2,268,200. (For comparison purposes, California's Central Valley is losing 15,000 acres of farmland every year.) The establishment of the planning program meant that over 300,000 acres in the Willamette Valley were rezoned in 1973 from rural homesites to agriculture.[290]

A number of local governments in the Portland region have developed programs to assist in promoting a regional food economy. There are between 30 and 40 farmers' markets in the area that have relationships with growers in the region. There is a Chefs' Collaborative[291] chapter in the area that emphasizes local produce on restaurant menus.[292] There is also a network of farms participating in Community Supported Agriculture, allowing consumers to buy shares in a farm in return for a supply of produce and establishing a direct relationship with the farmer.[293]

The type of urban growth that has occurred in the Portland region may promote, support and enhance local agriculture in the future:

> The cultural and economic context of agricultural change around Portland suggests that population increase and cultural change can provide opportunities for farming by creating markets for locally grown products. Changing food preferences and local food politics can affect land use and landscape and help shape a regional dynamic where agriculture connects rather than divides urban and rural residents.[294]

Natural Environment Issues

It has been suggested that the UGB functions mainly to limit urban sprawl and less to create green spaces as a greenbelt typically does. A public consultation on growth management in the mid-1990s showed support for open spaces separating the UGB from nearby cities that would act as green belt buffers.[295]

However, the Portland UGB does not appear to have been able to protect the natural environment by encouraging transit use over the use of automobiles. A recent study was unable to,

> Find evidence to suggest that Portland's UGB enhanced public transit usage reduced auto users. Although the growth rate for transit users is moderately higher than in other metropolitan areas, ranked at 11th [among 32 metropolitan areas], auto users have also increased at a faster rate than in other regions, ranked at 12th.[296]

Current Health of Greenbelt

Many see the UGBs in the Portland Metro Region to be very successful in a number of respects. For the most part, urban development has not encroached on prime agricultural land or on forests. Within Portland there has been efficient, compact growth, much of it infill planned in a new urbanist architectural style.[297] Greater Portland has remained an aesthetically appealing city.[298]

Although, the Portland UGB has been criticized for unaffordable housing, a study in 2000 used an econometric analysis to determine that this was probably not an accurate claim:

> While the UGB has likely imposed upward pressure on prices, the results indicate that the effect has been fairly modest. The large price increases Portland has experienced over the past 7 years most likely reflect…a speculative bull market riding on the back of an initial demand surge. It is of course possible, in addition, that popular perceptions of a UGB-induced land shortage have helped fuel such a speculative wave.[299]

In more than 20 years of existence, the land area in Portland's UGB has expanded by only two per cent, although the population of the City of Portland has grown by 50 per cent and Metro Portland's population increase by 17 per cent. Although the most recent UGB expansion in 2002 was the largest in its history, the Metro government also introduced policies at that time to protect existing neighbourhoods, provide more employment lands and improve local streets and commercial centres. Portland's UGB is credited with protecting a strong agricultural industry in the region and revitalizing the City of Portland.[300]

Statistics show that the Portland UGB has been successful in increasing the density of urban development:

> Between 1950 and 1970 – the first two decades of unimpeded automobile based suburbanization – the area of urbanized land exploded while the average population density fell by a third. From 1970 to 1980, the subdivision frontier continued its rapid expansion but the decline in average density slowed markedly. Since the Urban Growth Boundary was put into place, the area of developed land has increased much more

> slowly and the downward trend in average residential density actually reversed. From 1980 to 1994, the metropolitan population increased by 25% but the land devoted to urban uses increased only 16%. In contrast, the population in the Chicago area rose 4% from 1970 to 1990 but urbanized land by 46%. In 1994 the Portland area was building new housing at a density of five dwelling units per acre. By 1990 the density of new development averaged eight dwellings per acre… The average new lot size in 1998 was 6200 square feet, down from 12,800 square feet in 1978.[301]

The future for the Portland UGB looks positive due to a continued commitment by the Metro government. A long-range 50 year growth concept adopted by the region looks out to the year 2040 and highlights the importance of supporting mixed-use urban centres within the urban growth boundary and protecting open spaces both inside and out of the urban growth boundary.[302]

6.5 British Columbia Agricultural Land Reserve

Farming and Food Issues

From 1971 to 2001, the quantity of dependable agricultural land being converted to urban land more than doubled in Canada, growing from 1.7 million to 3.5 million acres (690,000 to 1,430,000 hectares). In British Columbia, however, there was no net loss of agricultural land between 1974 and 2003. This can be attributed to the existence of the ALR as it ensured the amount of land that was included in and excluded from the reserve over that period of time was roughly equal. As noted above, this achievement is somewhat compromised by the fact that more prime agricultural land has been excluded than has been included in the ALR.[303]

Current Health of Greenbelt

The ALR has had a generally positive impact by restricting development to farm uses over an extended period of time and directing non-farm development away from the working landscape into areas that are already serviced. The ALR has acted as "an important urban containment boundary in the areas of the province where human settlement, ecologically sensitive areas and the agricultural sector compete most intensely for land."[304]

In spite of this, the original purposes and effectiveness of the ALR have been chipped away at over time. In 1977, when the original Land Commission Act was replaced with the Agricultural Land Commission Act,

> Its responsibilities were restricted to the preservation of farmland. By deleting all sections of the Act having any reference to non-agricultural use, it became difficult to integrate land preservation planning with comprehensive economic development and land use planning. The single sector planning approach was reinforced by appointing to the Commission only people with a primary association with agriculture. By narrowing the focus of its mandate, the task of protecting agricultural land became more difficult for the Commission, because it could no longer view preservation in the context of other land use needs.[305]

In 2000, the ALC was amalgamated with the Forest Land Commission for a short period of time and the new Commission was structured loosely by region. This amalgamation was reversed in 2001, dissolving the restructured Commission, but in 2002 the government decided to continue using a regional model by developing six new regional panels composed of three members each. These panels only hear ALR applications in their own regions.[306] Although the government justified this change on the grounds that panels should be sensitive to local considerations, it is also true that local decision-makers may be unduly influenced by "real and perceived short-term economic development needs outside major urban centres [that] can…be a huge factor in the erosion of the ALR."[307]

More than 20 years ago, in 1985, excellent questions were being asked about some successful exclusion applications that had resulted in agricultural land being removed from the ALR in the Okanagan between 1974 and 1982:

> Do these exclusions represent 'fine tuning', i.e. correcting classification errors, refining boundaries and making adjustments to reflect property boundaries or the reality of the economic viability of a farming area already cut up into small separated parcels by urban intrusions? Or do the exclusions represent a continuing trend which will ultimately undermine the intent of the ALR?[308]

These questions concerning the removal of land from the ALR are still very relevant today.

Although the ALR has slowed the rate at which prime farmland disappears due to development, it is still being removed at a fairly high rate and it is the most productive land that is being taken for development. The ALC's current service plan allows for up to a tenth of one per cent of land in the ALR to be removed between 2005 and 2008 to meet a 'community need,' the criteria for which are vaguely defined; this would amount to approximately 11,762 acres (4,760 hectares), or almost half the size of the City of Vancouver.[309] A recent report projects that "[i]f the Commission excluded prime land (class 1, 2 and 3 land, which comprises just a fifth of the reserve) at the maximum rate in the service plan guideline on an ongoing basis, BC would lose five per cent of its prime agricultural land every 30 years."[310]

6.6 Ontario Greenbelt

Farming and Food Issues

Farmers are the stewards of the Greenbelt. Agriculture and local food are two key areas of focus for the Ontario Greenbelt. So far, great strides have been taken to provide farmers within the Greenbelt with the appropriate funds and assistance they need.

This is found in several of the grant making decisions the *Friends of the Greenbelt Foundation* has made including grants to programs like the Farm Stewardship Program, which supports 400 on-farm projects. It provides technical and financial assistance to support the adoption of beneficial management practices (BMPs) by agricultural producers and land managers. BMPs include minimizing and mitigating the impacts and risks to the environment by maintaining or improving the quality of soil, water, air and biodiversity; ensuring the long term health and sustainability of natural resources used for agricultural production; and supporting the long-term economic and environmental viability of the agriculture industry. [312]

In terms of threatened development, the provincial government has passed legislation to ensure the agricultural integrity of the Duffins-Rouge Agricultural Preserve and has released a proposed plan for an adjoining area of prime farmland, wetlands, woodlands and rural hamlets that would protect 2/3 of the area as green space.[313]

Without prime agricultural land in the Greenbelt, Ontario farmers would not be able to provide the ample amount of food it does. The Ontario Greenbelt has an abundance of locally grown produce, meat, dairy products and other specialty foods. The Greenbelt permanently protects about 100,000 acres (40,469 hectares) of Niagara Peninsula tender-fruit and grape specialty crop area as well as the entire Holland Marsh specialty crop area of over 15,000 acres (6,070 hectares).

Farmers' markets and on-farm markets are increasing throughout Ontario, making it easier for people to connect with their food and the farmers who provide it. On-farm markets allow farmers the chance to educate the public about food and to demonstrate their farming practices. Despite these opportunities, there has been tension among farmers with regards to Greenbelt legislation. The Greenbelt Plan encourages existing farming practices to continue however the land cannot be developed; it must remain within the land use that it is currently zoned for, which some farmers dislike.

Support for Farmers and Local Food

Several programs in the Greenbelt exist to help promote farmers and local food including the Greenbelt Farm Stewardship Program, which provides both technical and financial assistance to agricultural producers and land managers to support the adoption of beneficial management practices.

Farmers' markets programs also play a significant role in supporting farmers and getting their crops out to the public more directly. Farmers' markets allow farmers to get a fair price for their products.

A recent grant from the *Friends of the Greenbelt Foundation* to the University of Guelph's Centre for Land and Water Stewardship program is helping immigrant farmers and young farmers learn to farm through training farms and also helping increase the amount of ethnic crops that are being produced on Ontario Greenbelt farms.

Local Food Plus is a non-profit organization that brings local farmers and consumers together in order to create a more sustainable food system. They certify farmers and processors using socially and environmentally responsible practices and link them with local purchasers to create more opportunities for the public to enjoy local food in restaurants, hospitals, schools and other institutions.

The *Foundation* also created the My Local Greenbelt Guide in support of local food and tourism. The free booklet contains more than 60 pages with more than 400 listings covering wineries, orchards, farmers' markets, stores, sugar bush operations, festivals and fairs all located in or just outside the Greenbelt.

Tourism and Recreation Issues

One of the most popular activities to take part in in the Greenbelt is hiking. Ontario's Greenbelt includes Canada's largest network of hiking trails. The *Friends of the Greenbelt Foundation* recently released the Greenbelt Walks Hiking brochure and map to encourage Ontarians to explore what the Greenbelt has to offer in terms of hiking trails and recreation. The three main trails in the Greenbelt are outlined on the map -- the Bruce Trail, Oak Ridges Trail and TransCanada Trail. Currently, it is

the only map available that includes all three trails together.

Other tourism and recreational activities supported by the Greenbelt include opportunities to visit 125,000 acres (50,585 hectares) of parkland, 17 ski hills, 115 golf courses, or 50 wineries.[314]

Natural Environment Issues

Since the Ontario Greenbelt has only been established since 2005, there have been notable successes during that time. The Ontario government has worked to prevent development that had been planned or proposed in a number of sensitive areas in the Greenbelt. For example, the province has opposed attempts to reduce the size of the Natural Heritage System identified around provincially significant wetlands in the Trafalgar Moraine. The government has also refused to allow a highway to run through the Boyd Ecological Complex containing an old-growth forest, provincially threatened species, rivers and wetlands.

In February 2006, the Ontario government extended the environmental protection in the Rouge River Watershed in Richmond Hill through an amendment to the Greenbelt Transition Regulation. The amendment resulted in 19,924 acres (8,062 hectares) of the Rouge River Watershed now being protected under the Greenbelt.

Also important is the protection of clean air and water. The Greenbelt now protects the headwaters of all major watersheds in the western Greater Toronto Area that were not previously protected by the Niagara Escarpment or Oak Ridges Moraine Plans.

The Greenbelt also protects the habitat of 66 endangered species.

Quarries, always a contentious issue, continue to be proposed and approved in environmentally significant areas including farmland, the Niagara Escarpment and Oak Ridges Moraine. Pit mining comes with several ecological costs including threatening already endangered species, fragile forests and wetlands; taking considerable amounts of drinking water; releasing harmful pollution to our air from thousands of truck journeys per day; and leaving permanently scarred landscapes.[311]

Education

The Greenbelt has been adopted into the Ontario school curriculum. Students are encouraged to learn about the natural habitat that surrounds them and about the importance of local food and agriculture. The curriculum also focuses on the effects of urban development and the role of the greenbelt in curbing urban sprawl.

The *Greenbelt Foundation* has supported EcoSource's Farm to School program. The program gives students the chance to eat fresh local food and learn where it comes from. The project currently involves students in Mississauga but Ecosource is working towards getting the Peel Region school boards to create a district-wide program to purchase healthy snacks for students from local Greenbelt farmers.

Education of the Greenbelt is also done through different communications tools introduced by the *Foundation* including the Greenbelt Hiking Map and Brochure, the Occasional Paper Series the *Foundation* publishes in order to inform the public regarding different topics associated with the Greenbelt. Topics include farmers' markets, the Holland Marsh and ethnic and young farmers. Articles and advertorials that appear in local newspapers throughout the Greenbelt including ethnic newspapers also provide a chance for the public to learn about the Greenbelt.

Current Health of the Greenbelt

The Ontario Greenbelt legislation states that amendments to the Greenbelt Plan cannot have the effect of reducing the total land area of the Greenbelt Plan[315]. Another positive sign for the future health of the area is that during the 2007 provincial election, the four main parties stated they were in favor of the Greenbelt, indicating not only large support for the Greenbelt from the general public but also from government.

Since its existence, Ontario's Greenbelt has remained strong in its prominence and ability to remain sustainable with the help of groups like the *Friends of the Greenbelt Foundation*, the Ontario Greenbelt Alliance and the Greenbelt Council.

The *Friends of the Greenbelt Foundation* has worked diligently on its three priority goals:

- To increase public awareness of our Greenbelt and to increase public engagement and participation in Greenbelt activities;
- To promote and support a strong rural community and working rural landscape, with emphasis on agriculture and viniculture, and to include mutually-supportive relationships between the Greenbelt and the urban areas adjacent to it; and
- To protect and restore the natural environment.[316]

The Ontario Greenbelt Alliance is a diverse multi-stakeholder coalition of more than 80 organizations who share a common vision for protecting and expanding the Greenbelt. It is a watchdog organization that protects areas of the Greenbelt that represent the richest environmental functions and features from development pressures.[317] The Alliance recently made several key recommendations in order to further the success of the area, emphasizing aggregate reform:

- Develop and put in place a long term conservation strategy for aggregates (stone, sand, gravel and shale) – reduce, reuse, recycle.
- Stop new aggregate extraction in the Greenbelt and abutting agricultural land.
- Redesign aggregate licensing and permit approvals
- Develop effective mechanisms for operations and rehabilitation compliance – the industry currently monitors itself.
- Address personal and environmental health concerns – carcinogenic dust and carbon dioxide.[318]

The 2007 report card on the Ontario Greenbelt reiterated the positive impact it is having. The report showed that the government has done a good job of defending the Greenbelt boundaries and of greening the Greenbelt by designating provincially-owned land as protected parkland.

The Canadian Institute of Planners (CIP) awarded the Ontario Government its 2007 Award for Planning Excellence in the category of Environmental Planning for its Greenbelt Plan. The Government of Ontario also received an award from the CIP in the re-urbanization category for its Growth Plan for the Greater Golden Horseshoe.

7

Other Jurisdictions

7.1 Copenhagen Finger Plan

Copenhagen has used a 'green wedge' concept to ensure that urban development allows for urban residents to have access to open spaces, parks and natural areas.[319] Green wedges are distinct from greenbelts in that they are undeveloped areas used to,

> Define the land use structure of the urban area. They separate developed areas, and provide open space for amenity and recreation purposes. They may also incorporate land or corridors which are important for wildlife.[320]

The finger plan evolved out of a 1926 traffic plan that included suburban electric trains that were built in a finger-like pattern that radiated out from the city core.[321]

The Copenhagen Finger Plan attempts to integrate open green spaces and bike paths between urban corridors so that they are easily accessible to those who live in the cities and public transport such as commuter trains can be located conveniently along the fingers. The creative use of the finger

plan has promoted city pride, boosted the city's economy, created a pedestrian-friendly downtown core with few cars, and resulted in strong support for the planning framework by all levels of government.[322]

7.2 Ottawa Greenbelt

The National Capital Commission began acquiring land in the late 1950s in order to establish the Greenbelt, which now borders much of Ottawa's urban or developed land.[323] The Greenbelt is now made up of 50,285 acres (20,350 hectares) of open land, including farmland, wetlands and forests on the Ontario side of the Ottawa River.[324]

The impact of the Ottawa Greenbelt has not been so much to restrict suburban development but to push major satellite communities further out from the urban centre to the other side of the Greenbelt as the city grew. An evaluation of the greenbelt's economic impact "found that it has had little effect on the density of existing and planned suburban development, or suburban landmarkets."[325] This was likely due, at least in part, to the nature of the relationship between the City of Ottawa and the federal government, and their different powers:

> Back in the 1960s, there was not much cooperation with respect to implementing the greenbelt, in spite of efforts by the National Capital Commission to convince local municipalities to support its establishment. The commission could make dramatic changes on local landscapes without even consulting local municipalities.[326]

The lack of municipal support of the notion of the Greenbelt, and the lack of any additional measures to prevent or focus suburban growth beyond the Greenbelt, contributed to the Ottawa Greenbelt's failure.

7.3 Florida Greenbelt Law

Florida's Greenbelt Law came into effect in 1959 to impose a system of reduced property taxation based on an agricultural or Greenbelt assessment. The original purpose of the law was to make forestry an economically viable land use given the importance of forestry to the economy and the environment in Florida. The law is now equally important in generally protecting agriculture in the state.[327]

Recently there was a proposal to amend the Greenbelt by terminating a landowner's lower tax rate at the point when building permits are issued for the property or when a landowner requests approvals that show an intention to change the land use.[328]

7.4 San Francisco Bay Area Greenbelt

The term 'greenbelt' is also used in the San Francisco Bay area but there is no statutory greenbelt framework in place. Instead, non-profit organizations work to protect open space from urbanization by pressing local governments to establish urban growth boundaries. There is currently about 1 million acres (404,685 hectares) of protected open space in the region out of a total of approximately 3 million acres (1.2 million hectares) comprised of private land, conservation easements and parks op-

erated by all levels of government. Local groups recently announced that they want to work to protect another million acres.[329] The Greenbelt Alliance is a non-profit land conservation and urban planning organizations that has been working with local conservation groups in the Bay area since 1958.[330]

Other groups in the San Francisco Bay area work on local food issues. One such group is Sustainable Agriculture Education (SAGE), which fosters links between urban and rural residents and promotes "the establishment of multifunctional agriculture at the metropolitan edge."[331] This organization has undertaken a number of initiatives to strengthen these urban-rural connections, including an Urban Edge Agricultural Parks Project, a Farmers Market Resource Kit, new ruralism policy research and an annual AgriCultural Roots Fair.[332]

8

Common Threats to Greenbelts

In conclusion, this report on international greenbelts demonstrates examples of both successes and failures in the various jurisdictions studied. Although some of the greenbelts have demonstrated great longevity, they continue to experience both common and unique threats. It is instructive to emphasize the most significant threats in order to guard against them in the context of Ontario's Greenbelt.

8.1 Housing and Urban Development Pressure

The most prevalent threat to preserving a greenbelt is that of housing and urban development pressure. This has been experienced in the UK, the Netherlands, Oregon and BC. It is an ongoing concern in the London Green Belt and other greenbelts in the UK, where greenbelt policy is under review by the government and may be relaxed to permit increased urbanization. The Dutch Green Heart is also at risk due to the suburbanisation of larger and smaller cities and the pressure to accommodate a growing population and provide sufficient affordable housing. In BC, urban development pressure continues to be a serious threat to the ALR.

In Portland, Oregon, affordable housing is a significant issue for the UGB. In 2002, there was a large expansion of the UGB after real estate agents and home builders in the Portland metropolitan area argued that there was an affordable housing crisis by the UGB policy. However, research suggests that it is not true that UGBs have caused housing prices to rise more quickly in Portland.

8.2 Resource Extraction

Development pressures related to natural resource extraction may also threaten the long-term preservation of greenbelts. For example, mineral extraction poses a continuing threat to the London Green Belt. The gravel pits created in order to extract the minerals subsequently become landfills used for waste disposal. In BC, the most recent revision of the Agricultural Land Commission Act included an expansion of the oil and gas and mining activities permitted on agricultural land in the ALR.

8.3 Agriculture

Another common struggle in many greenbelts is the protection of agriculture from urban development. This is an issue in the UK, the Netherlands, Portland, and particularly in BC where the Agricultural Land Commission continues to allow the removal of productive agricultural land from the ALR for development.

However, agriculture may be seen as a threat as opposed a sector in need of protection, depending on the priorities of a specific greenbelt. In the case of the Iron Curtain Green Belt in Germany, its purpose is to protect natural heritage areas from conversion in to farmland that were formerly protected as part of the border area between East and West Germany.

8.4 Transportation

The construction of infrastructure such as new roads, highways and railway lines as infrastructure for transporting an increasing number of commuters may also pose a threat to greenbelt preservation. In the Netherlands, this is a concern that must be addressed in managing the Green Heart. This has also been an issue in the UK where some are advocating for new policies that link urban density and public transport in the context of the greenbelt.

9

Conclusions: Lessons Learned

Analysis of the different greenbelts in the jurisdictions studied reveals a number of lessons that can be used to strengthen the Ontario Greenbelt.

9.1 Governance, Research and Public Policy

Decentralized governance models and deregulation initiatives tend to weaken greenbelt protection. In the UK during the government of the 1980s and 1990s, government policies supported market-led development, which influenced local planning policies. During this time, the central government also cut funding to local authorities and instead encouraged them to partner with private development interests. The combined effect of these decisions was to weaken the ability of local planning authorities to act in the public interest to oppose excessive development in order to protect the environment and agriculture. In BC, some of the recent changes to the structure and functioning of the Agricultural Land Commission were part of a provincial government deregulation initiative that included changes to the Agricultural Land Commission Act permitting oil and gas and mining activities on agricultural land, and increasing Cabinet authority to regulate permissible non-farm uses of agricultural land.

These changes have spurred concerns that too much prime farmland is being removed from the ALR.

Greenbelts are often intended to achieve multiple goals, such as supporting agriculture, promoting tourism in rural communities and protecting sensitive natural heritage environments. In Ontario, these interests are the responsibility of various ministries, including the Ministry of the Environment, the Ministry of Natural Resources and the Ministry of Tourism. A governance structure that integrates these responsibilities into one ministry brings together the issues of environment, food and rural affairs, as with Defra in the UK government. This guards against a silo mentality and ensures that environmental, agricultural and rural concerns are less likely to be seen as competing values.

It is common to see stakeholders who oppose greenbelt policies advance the argument that they have an adverse effect on the cost of housing. However, research has shown that Portland's UGB only had relatively small effects on housing prices and that it was not inevitable that UGBs would cause housing prices to rise faster. It is important that data be collected and credible research undertaken on the actual effects of greenbelt policy.

It is essential that government and tribunal decisions about the greenbelt are transparent and accountable, and clearly protect the environment, agriculture and rural nature of the greenbelt. BC's Agricultural Land Commission has been criticized for a lack of openness in relation to applications for ALR removals, subdivision, and non-farm use.

It is important that government support research and policy development that promotes farming practices that contribute to the health of communities and the environment. BC's government has been urged to develop policies to support healthy farms and farming practices, and to support research on the factors that may impair the viability of farming in the ALR.

9.2 Support for Farmers, Quality Farmland and Local Food

It is important to develop effective programs in support of farmers in greenbelts. In the UK, examples of such programs include Environmental Stewardship, to reward farmers for effective environmental land management, and the English Woodland Grant Scheme, to provide grants to sustain and increase benefits of existing woodlands and help create new woodlands.

It is also beneficial to make long-term public funding available to recognize and support the landscape conservation work that farmers undertake on behalf of the public. In the UK, such financial programs have been developed to acknowledge the fact that farmers provide many public benefits that are not adequately rewarded through their sales of farm produce.

Programs to assist greenbelt farmers and rural residents in developing innovative businesses relating to agriculture have been met with success. In the UK, such programs have included: farmers' markets, and ethnic and specialty markets; support for organic farming; recreational and tourism activities; and promotion of local food, sustainable food production and connections between consumers and the origins of the food they eat.

Local food webs may be created to more closely link people and businesses that grow, process, sell and buy food within a local region. In the UK, a comprehensive website at www.Localfoodweb.co.uk provides consumers with a searchable directory of farm shops, specialty food retailers, farmers' markets and rural stores, and a forum to exchange recommendations with other consumers. In Portland, local governments have developed programs to assist in promoting a regional food economy.

Local products may be branded as such to reinforce a direct association for the consumer between the local product and the greenbelt area, thus promoting local agriculture. In the Netherlands, farmers have joined together to open shops to sell local products grown and made in the area, branded as Green Heart Products. They are marketed to alternative buyers rather than a mainstream market.

Programs may be directed at changing food preferences to be more inclusive of greenbelt products. In Portland, such initiatives include collaborative chefs' organizations that support and emphasize local produce on restaurant menus, and development of Community Supported Agriculture programs that allow consumers to buy shares in a farm in exchange for a supply of produce and a direct relationship with the farmer.

9.3 Education

Education is important to promoting understanding about rural values, natural heritage and agriculture, and connecting urban and rural communities. In the UK, farmers have made recreation and tourism activities and education about local food available by opening their farms to the public to showcase their land and traditional farm practices. In Germany, a proposed short-term 'Experience the Green Belt' program is being considered to promote the Iron Curtain Green Belt and teach students about its nature, history and rural culture.

9.4 Accessibility

It is important that a greenbelt be both physically and economically accessible to urban residents. This has been observed as a shortcoming in the London Green Belt, resulting in specific recommendations that the following be established: adequate and efficient public transit connecting residents to protected rural spaces and parks in the greenbelt; many connected walking and cycling routes; minimal or non-existent entrance fees to parks; and trails and public transit that are accessible to those with physical disabilities.

It is also important that greenbelts be accessible to those from all cultural backgrounds. Recent recommendations directed at the London Green Belt suggest that information about the greenbelt be available in multiple languages and distributed to people of different ethnic backgrounds and that efforts be made to ensure people of all ethnic backgrounds feel welcome, comfortable and secure in the greenbelt.

9.5 Fundraising

It may also be beneficial to establish public fundraising programs to support the greenbelt and foster connections to it. In Germany, BUND has established Green Share Certificates to fund measures aimed at protecting and restoring unique or threatened habitats in the Iron Curtain Green Belt, and at providing donors with a direct connection to the Green Belt.

10

Recommendations for Ontario's Greenbelt

The following is a list of recommendations to build on the success of the Ontario Greenbelt. This list of recommendations is by no means exhaustive. Rather, they are early observations to ensure the Ontario Greenbelt remains the world-leading Greenbelt it already is and will continue to protect and improve the quality of life for residents in the Golden Horseshoe and better prepare us for the affects of climate change. These ideas are the first steps in putting the infrastructure in place to ensure future success.

10.1 Reducing Development Pressure

1. Efforts should be made to grow the Greenbelt in size in order to eliminate leapfrog development. There is evidence of leapfrog development occurring in areas surrounding the Greenbelt, such as Simcoe County. This type of development is an inefficient use of land leading to greater pressure to build sewer and water infrastructure and highways and roads through the Greenbelt to service areas with few homes and jobs per square kilometer.

Some municipalities have shown interest in becoming a part of the Greenbelt such as Guelph. Creating a larger area of land to prevent uncontrolled urban development and sprawl would mean a healthier Ontario for all.

2. The ambitious transit goals of MoveOntario 2020, a multi-year $17.5 billion dollar rapid transit action plan for the Greater Toronto Area and Hamilton, should be implemented. The Plan reduces car dependence which will alleviate congestion and air quality concerns in the area and pressures to build more highways and roads in the Greenbelt. The Plan will reduce car trips by 300 million and create 800 million new transit trips, reducing CO2 emissions by 10 megatonnes. The Plan is also integral to the success of Places to Grow.

3. Over the coming years, research should be undertaken to measure the influence of lifestyle choices on the permanency of the Greenbelt including trends in agricultural profitability in the Greenbelt, infrastructure development, human health and the cost of housing in surrounding cities.

10.2 Environmental Contributions

4. The province and rural communities in the Greenbelt should begin to account for the non-market value of the natural capital of the Greenbelt, including its climate regulating forests, clean water resources and source of local food. These economic values should be integrated into future land use policies and decisions.

5. Stronger protection for environmentally-sensitive lands and prime agricultural lands outside the Greenbelt within Places to Grow is needed to maintain the health of viability of these features in the Greenbelt.

10.3 Viable Agriculture

6. The provincial and federal governments should be encouraged to develop programs for Greenbelt farmers similar to the UK's Environmental Stewardship, which rewards farmers for effective environmental management of their land; and the English Woodland Grant Scheme, which provides grants to sustain and increase the benefits of existing woodlands and to help create new woodlands. The province should consider a Greenbelt wide Alternative Land Use Services (ALUS) concept similar to that introduced in Norfolk, Ontario. ALUS is an agricultural policy concept that compensates farmers financially for implementing environmental stewardship activities that benefit everyone while at the same time motivating the conservation and protection of key environmental assets in the Greenbelt. The compensation would contribute to the viability of farming in the Greenbelt, an industry which has experienced increased land and businesses costs due to urban development and sprawl among other factors.

7. Support should be offered by provincial and federal governments to farmers and rural residents in the Greenbelt who wish to develop innovative businesses relating to agriculture such as farmers' markets, ethnic and specialty markets, organic farming and recreational and tourism activities. Promotion of local, sustainable food production and connections between consumers and the origins of the food they eat is also necessary.

8. Efforts should be made by provincial and federal governments to create local food webs to link people and businesses that grow, process, sell and buy food within a local region. Both municipal and public institutions should lead by example by creating food policies that make local food more readily available to the consumer. The government should also create an incentive program that encourages people to buy local. A program similar to the Netherlands' Green Heart Products could also help promote local agriculture in the Greenbelt by branding local products and thereby reinforcing a direct association for the consumer between the local product and the Greenbelt. A comprehensive website such as www.Localfoodweb.co.uk could provide consumers with a searchable directory of farm shops, specialty food retailers, farmers' markets and rural stores, and a forum to exchange recommendations with other consumers.

9. The provincial and federal governments should fund research on the factors likely to impair the viability of farming in the Greenbelt now and in the future, and develop policies to support Greenbelt farms and farming practices that contribute to the health of communities and the environment.

10. Steps should be taken to ensure that the local food available in the Greenbelt reflects the diversity of people who live in and around it. According to the 2006 Canadian Census, more than 50 per cent of Canada's visible minority population resides in Ontario. A multicultural Ontario should celebrate with a diverse assortment of food.

11. Steps should be taken to ensure that farmland in the Greenbelt stays productive so that the area can continue to provide a secure local food source in the future. The province should support the growth of the newly founded FarmLINK program, designed by FarmStart and the University of Guelph, which links farmers with rural landowners that own prime farmland.

10.4 Governance, Research and Public Policy

12. A high level inter-ministerial working group should be established to develop Greenbelt supportive policies.

10.5 Education

13. Building on the success of the Grade 7-9 Ontario Public School curriculum on the Greenbelt, the opportunity to include the Ontario Greenbelt in the curriculum throughout all grades should be explored. Public education about the Greenbelt could be pro-

moted through short-term immersion programs to promote the Greenbelt and to educate the public about it and teach students about the nature, history and rural culture of the Greenbelt.

14. The provincial government should make it mandatory for secondary students to obtain a food knowledge certificate in order for them to graduate. A curriculum review completed by the Ontario Farm to School Network, which grew out of conference held by FoodShare, found that education about the production, acquisition, preparation and consumption of food and its relationship to health is almost non-existent in Ontario.

Endnotes

* Note: All websites are current as of the date the research for this paper took place. The following websites were accessed between August 2006 and April 2007. Any changes that may have occurred to the URL's provided is of no fault to CIELAP or the *Friends of the Greenbelt Foundation*.

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