

Implications of Varied Land Use Designations and Non-agricultural Uses in The Greater Golden
Horseshoe

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Abstract

In recent times there has been an increased realization for agricultural preservation across the globe and in North America. The post-2000 era ushered a wave of major changes in land use policies across the Greater Golden Horseshoe GGH region which included the four plans; The Green Belt Plan, Oak Ridges Moraine Conservation Plan, Niagara Escarpment Plan and The Growth Plan. Such wide range of provincial policies in addition to the adoption of various regional agricultural guidelines and strategies leads to complex decision making and prioritization. It has been shown that land use decisions across the GGH have been driven by policies which permit some non-agriculture uses on the agricultural land base. This is primarily because municipalities have varying growth pressures and priorities. Moreover, municipalities in the region designate agriculture areas based on conformity with the PPS and an open-ended view of what is permitted usage. It leads to inefficient management of the valuable land base resource that is important to the viability of agriculture in the region.

This research paper recognizes the need for enhancing the criteria for designating rural and agriculture lands in a standardized manner and delineating them effectively, while also separating non-agriculture uses in the agriculture to cater a wide range of farming types. The research exhibits the need for consistent land use designation and nomenclature the Greater Golden Horseshoe, pointing towards a regional systems based approach for agriculture.

Key words: Land use, Policy, Zoning, Designation, Prime Agriculture, Rural, Non-agricultural use

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Acronyms

CLI: Canada Land Inventory

ZBL: Zoning Bylaw

PPS: Provincial Policy Statement

OMAFRA: Ontario Ministry of Agriculture, Food and Rural Affairs

MMAH: Ministry of Municipal Affairs and Housing

OP: Official Plan

AIA: Agricultural Impact Assessment

Introduction

The rural landscape in Ontario, especially in the Greater Golden Horseshoe (GGH) Area is characteristic of vibrant urban centers and diverse communities. The GGH supports the influx of thousands of immigrants every year. The region's population is expected to increase on average of 3 million in the next 30 years; this region is also home to the most fertile agricultural lands in the country which lie next to the urban centers. Sustainable agriculture is needed to maintain the food supply and the major portion of the economy depends on it. It is under such circumstances that land use planning here demands the most intricate balance between population growth pressures and preserving the agricultural land base. The current regulatory regime requires municipal conformity with the provincial regulations and plans. While this is one way of looking at the planning framework, at the micro level, zoning and land use designation criteria drive what activity is permitted or restricted on such lands. In order to make agriculture sustainable, resilient and viable for the long run food supply, various policies are at play to protect these agricultural lands.

The provincial policy statement defines 'Prime Agriculture Lands' and 'Prime agriculture Area' based on soil capability. Each individual municipality then designates these lands according to the provincial definitions outlined. How municipalities identify lands will ultimately determine if an area falls under this protective umbrella. It is, therefore, crucial for decision-makers to give equal importance to the policies and the existing procedural system. The province has made sure that policies such as the Growth Plan, The Oak Ridges Moraine, and the Greenbelt Plan to protect the agricultural land base. The onus is on the municipalities and upper-tiers to determine what is considered rural and what can be identified as prime agriculture vs general

agriculture lands. The variation is not large but the potential is enough to affect the productive output of the agriculture in the region. There is a need for an integrated regional food-network that would be able to deal with such issues through a robust policy framework.

1.0 Problem Statement

Land use designation policies steer the way lands are allocated for specific use. Provincial plans, regulations and local agricultural strategies determine how these policies are shaped. Over the years agricultural land use has been seen to evolve into a restrictive framework, this is because with time there has been more awareness on the importance of a sustainable agricultural land base, the environment, and farming systems, as they ultimately support our food supply. As the GGH is home to the irreplaceable prime farmlands, we see more restrictive policies in this region. The province has taken steps to protect this resource by declaring its interests through the Provincial Policy Statement (PPS). The provincial policy statement identifies and defines what 'Rural' is and what can be defined as 'Prime agriculture'. However, it is the discretion of individual municipalities as to how they incorporate these designations in the official planning documents and strategies. As a result, we find inconsistent land use designations across the region, leading more occurrences of lot-creation resulting in non-contiguous and fragmented agriculture land base where class 1-3 lands to be interrupted by pockets lower capability lands that may not be protected. It is under such circumstances that a comprehensive approach to land designation and decision making is required. This is possible through a systems-based approach to integrate and mobilize the agricultural resources. What needs to be seen is how such an approach can prove to be effective at either provincial, municipal or even at a federal level.

2.0 Goal and Objectives: The research provides an overview of the various agriculture policies at play in the GGH where these policies such as the Provincial Policy Statement, The Green Belt Plan, and The Growth Plan define ‘Rural Areas’ and ‘Prime Agriculture’ that ultimately translates into official plans, policies and strategies while guiding decisions at local and regional levels. Municipal approach to permitted non-agriculture uses varies across the region. This results in non-uniform agriculture land base, affecting the long-term agriculture and farming operations. The goal of the paper is to demonstrate the implications of inconsistent land use designations across municipalities in GGH such as that of ‘rural land’, ‘rural area’ and how this promotes or discourages various agriculture and non-agriculture related activities while also impacting the much-needed consistency in the land base for ‘prime agriculture area’ and the future success of agriculture in the region. The paper also aims to address the policy gaps to address the aforementioned issues.

The research goal will be achieved through the following objectives:

- Review literature to set a context for discussion, gain an understanding of the problem identified.
- Conduct a document review of provincial policies, official plans, local agricultural strategies, zoning bylaws of selected municipalities to understand how land use designations pertaining to agriculture and rural areas converge or diverge.
- Conduct interviews with key informants to determine the dynamics of varied land use designation and the implications of non-farm uses.
- Conduct a desk review in order to shortlist policy perspectives based on the findings from the literature, documents, and the interviews.

- Conduct an analysis of the research findings to provide policy recommendation for decision makers.

**The scope of this research is limited to the Greater Golden Horseshoes (GGH) region.

3.0 Methodology: The paper deals with the concept of agricultural land use designations and the implications of permitted non-farm activities on the agricultural land base. The hypothesis is that the agricultural land base (land available for agriculture) and agriculture activities can be impacted due to the variation in land use designations across jurisdictions and within jurisdictions. Pretermitted non-agricultural activities adjacent to or on agriculture land impact agricultural communities by affecting agricultural operations and through conversion of land among other effects.

The first step was to conduct a literature review on agricultural management framework under the current regime with respect to the challenges and the potential of the agricultural land base. The literature review also included the concept of permitted non-agriculture uses to identify and understand the current uses and the implications of such uses for agriculture operations in GGH region.

In order to understand how agriculture is being protected and how various policies interplay in the province of Ontario, a document review was conducted where various policies and regulations were reviewed that steer the land use decision-making process. The designations affecting agricultural land use and official documents were the primary focus of the review. The Provincial Policy Statement PPS and agriculture guidelines by Ontario Ministry of Agriculture, Food and Rural Affairs OMAFRA were consulted to identify nomenclatures representing agricultural land use and the policies that regulate permitted non-agricultural activities. In order

to grasp the ground realities, 4 case municipalities were chosen across the GGH and their official plans were checked for consistency with official documents and policies that permit or hinder non-farm activities were reviewed. Respective bylaws for agricultural and rural zones were reviewed while also checking for consistency in designations and nomenclatures. Policies pertaining to permitted non-agricultural use that were significant to the research were outlined for further analysis and desk review/analysis.

Semi-structured interviews were conducted and the respondents were planners from the respective target municipalities. The interviews were used to gather their input on the various land use designations, moreover, to determine the issues, trends, and implications of the non-agricultural uses. Their views on policy development and implementations process were also discussed. The interviewee responses were compared with the respective official documents eg: OP, ZBL, local agricultural strategies in to understand how agriculture and rural lands are designated in their region and why do they vary. Unique challenges from the respective municipalities were also identified. A list of non-agricultural uses was formulated from the document review. Lastly, a thorough desk review and analysis was done to shortlist policy perspectives and findings from the research activities.

7.0 Literature Review

The research began with a wide range of sources for the literature review and then narrowed down to relevant studies. This was done in order to set a framework for defining various concepts of the planning system where agriculture policy was being translated into action at local government level and the proposed '*Agricultural System*' in Ontario, agricultural land use designations and to provide a context for discussion. Next, to understand the impact of

permitted non-farm uses on the surrounding agriculture activities which includes farming and farm-related activities. Each of these concepts is diverse applications and the literature is integrated with other concepts into whole disciplines. It is not feasible to capture and explore the literature for each of these concepts but where permitted, this research has incorporated them and will likely use them as the study unfolds with various cases. The sources are academic and deal with non-agriculture use in rural areas, to provide specific context. The literature review is divided into themes as opposed to the source titles.

3.1 The role of Agricultural Zoning and Minimum Distance Separation MDS:

‘PLANTING THE SEEDS FOR FARM INNOVATION: Guide to Achieving Flexible Land Use Policy in Ontario’s Greater Golden Horseshoe’ is a research providing a local perspective on agricultural policies and how they impact their ability to innovate, eventually affecting the utilization and productive capacity of the agricultural land base. The view is that innovation brings a competitive edge to small-scale farmers and keep their operations viable.

The research is limited to a few indicators that can be expanded into policy areas for further review: Minimum Distance Separation (MDS), Minimum Farm Size, Value- adding severances, and Secondary Uses. The list is not exhaustive and neither do they factor in variables which affect agriculture viability comprehensively. However, the fact that these policy areas have been identified, it provides a starting point to address the gaps through research and academic works in the future. The resource further refines these factors and identify 4 policy areas that are restrictive to on-farm innovation, namely, Agricultural zoning, MDS, Minimum Farm Size and Policy Language. The list is not meticulously refined and the basis of choosing

these factors has not been explained, rather it acts as a possible hypothesis which is to be tested in the rest of the major research paper.

The author highlights the importance of zoning bylaws for the outcomes of uses. The basis on which these Zoning bylaws ZBLs have been developed is on assumptions about how agriculture has been perceived in the past, from this perspective current ZBLs can be considered as outdated. It has also been pointed out that many official plans seem to be on the review stage due to the conformity process initiated by provincial plans. A good policy suggestion has been provided that municipalities should update their ZBLs to better represent the agriculture industry of current times. The challenge here is that updating zoning bylaws and official plans require resources and it is a process which can take years before an official review has been approved. This can possibly explain why some municipalities are unable to adopt a common nomenclature in their documents in due time, across the region. Due to the constantly evolving patterns of policy and regulations, a simple method of updating the ZBLs and OPs should be brought into practice.

The author argues that the nature of zoning bylaws (ZBLs) can be seen as too prescriptive at times and this creates a narrow view of what is considered as a permitted while being too specific. Also, using broad terms and definitions would be open to interpretation and could undermine the process of protecting the agriculture land base. What needs to be done is to balance the specific and broad terms and define them clearly based on a universal language with validation across the administrative hierarchy. The paper also focuses on the type of zoning which better suits on-farm innovation. Where Euclidean zoning can be seen as too narrow and Performance-Based Zoning has been suggested. While this may seem as somewhat a flexible

option, this *should not be considered as an alternative*. Performance-based zoning is based on a point system, the performance and potential of a parcel of land should be used in land classification as evaluating each parcel based on points can become an overwhelming process. A hybrid approach for agricultural zoning is suggested. New forms of zoning should have studies and evidence to support it.

Agriculture zones across the region have been identified through the various cases in the study. The variety of agriculture zones or designations allow farmers to accommodate various type of agriculture activities. Multiple zones can be used to separate uses but they should not be unnecessarily be applied merely for credits of classification of uses. Rather, if the nature and the character of a municipality is such where multiple mixed uses exist that can be distinguished are in close proximity, then this approach seems appropriate. Moreover, the approach should be adopted with a word of caution, while innovation and viability is the intent, applying multiple zones and designations create an overlap and this leads to complexity in the process of implementation.

Sometimes, a broader approach of using a single agriculture zone may not accurately represent the uses in an area, a sub-zoning tier-based approach can be adopted where the additional uses can be outlined in a progressive manner expanded from a single zone. A single zone approach creates a uniform environment for provincial policies to be adopted with similar interpretations. Whatever approach is adopted it should be based on informed input from local farm operators, stakeholders and through a public engagement process—based on ground realities and analyzing possible future trends.

Minimum distance separation MDS has been long used a direct method of separating uses through a geographical buffer. The widespread use of this approach has raised some unwanted characteristics in the rural-agricultural landscape, as the author states that farms have increasingly become single-use and secondly it has isolated livestock operations on large parcels of land. While the effects of MDS on agricultural viability cannot be denied, the topic of discussion is much wider than this, there are so many factors that link the use of MDS and it's effect on agriculture that no single use should be shortlisted without much evidence.

The adoption of this approach has created silos of scattered uses across the region, therefore the adoption of MDS should not be widespread.

3.2 Zoning for agriculture and Defining Prime AG: Two resources were used for identifying how land use zoning is used to preserve agriculture land. First, *'PRESERVING AGRICULTURAL LAND FOR LOCAL FOOD PRODUCTION: POLICIES FROM OTHER PLACES AS A GUIDE TO LAND USE PLANNING FOR ONTARIO'*-- a policy document by Sustain Ontario, which identifies that the most common approach to preserving agricultural land is designating agricultural zones, where farm uses are prioritized and non-farm uses are limited (Sustain Ontario, 2013). It also states that "zoning for agriculture can help maintain a farmland base, and protect the economic viability of the farming sector" (Sustain Ontario, 2013, p. 3). Next, two methods are identified where "Agricultural Protection Zones can be used to protect agricultural land and promote local food production by:

1. Designating zones of prime agricultural land for exclusive farm use; 2. Defining permitted uses (secondary and mixed) to include appropriate non-farm agriculture-related uses and value-added operations;" (Sustain Ontario, 2013, p.4)

The document is not comprehensive but provides the underlying concept and basis of agriculture protection zones.

3.2.2 Defining Prime Agriculture: *‘Defining Prime Agricultural Land and Methods of Protection’* by A.D. Carver and J.E Yehner is the second resource which discusses how land can be retained in agriculture by using ‘unconventional’ zoning methods.

3.2.3 Methods of Protection: The authors suggest Open space zoning as one of the methods of preserving agriculture land. It’s based on the concept of clustering and concentrating residential lots into a part a concession. Clustering allows utilization of valuable farmland space and also reduces footprint. The document provides an insight of expanding rural environments and how they interact with the agriculture. A.D. Carver traces the roots of agriculture preservation and defines prime agriculture in the US. It is important to note that the transition and the need for development indirectly affect the farm activities by reducing the productive potential of the land. The paper recognized the conversion of agricultural land to non-agricultural uses in USA, where the major portion of the land lost is prime agriculture. The author identifies two facets of the effects of expanding development where development leads to direct conversion of farmland secondly, “development indirectly reduces the productive potential of the surrounding agricultural land by limiting it’s current or future use” (Carver, A.D., J.E. Yahner, 1996, p. 6). The Paper does not intricately describe the process of conversion but does highlight the basics of the process. It also recognized the fact that such conversion has long-term effects. This could include the gradual increase in restrictions on farming practices due to a growing non-farm population. The increasing pattern of scattered parcels of agricultural land reduces the economies of scale thus reducing the efficiency and increase in production costs.

3.2.4 Prime Agriculture: The author argues that the definition of prime agriculture should go beyond soil classification and crop yield and should be based on more comprehensive criteria within the context of land use planning; the author suggests that farmland should be defined based on location in addition to productivity. In Ontario, OMAFRA has proposed the Agriculture System approach where the definition and classification go beyond productivity and location but factor in a more comprehensive set of variables. Nonetheless, this paper provides some perspective as to how the approach to defining agriculture land should be updated.

3.3 Planning and Agriculture linkages in Ontario: *'PRESERVING AGRICULTURAL LAND FOR LOCAL FOOD PRODUCTION: POLICIES FROM OTHER PLACES AS A GUIDE TO LAND USE PLANNING FOR ONTARIO'* is a policy document by Sustain Ontario, published in 2013. It deals with various agriculture policies which have been applied in Ontario and are applicable in the North American context. It also lays out the process of policy implementation in Ontario. It provides an understanding of Agricultural land preservation which has been a path of many conflicts. Agricultural land preservation has recently developed into a formal integrated element of rural land-use planning. This is because agriculture is the backbone of Ontario and a major portion of agriculture goes to exports. It is one of those sensitive areas of the economy which requires an added layer of protection in order to secure the future of the region. It is important to understand that rural area uses encompass a larger number of uses than agriculture areas. Areas designated as 'Rural' may have a major portion of land designated for non-farm uses. "while changes to land use are necessary for economic development...conversion of agricultural lands to non-farm uses pose significant risks and costs."(Sustain Ontario, 2013, p. 2). This is true, especially for the *agriculture system* case. It is also the reason why the province has

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to create a policy where economic development and population growth has to be balanced with agriculture protection.

The preservation of agricultural land in Ontario is steered by provincial regulations, plans, and local land use planning tools. The province provides guidance through provincial policy statements (PPS) and plans. It sets out how land use may be controlled and The Planning Act allows the PPS to “integrate matters of provincial interest into provincial and municipal planning decisions by requiring that all decisions shall be consistent with the Provincial Policy Statement” (Ministry of Municipal Affairs and Housing (B), 2015, p. 2). The PPS recognizes the importance of agricultural land as a resource that needs protection.

What needs to be understood is that municipalities have knowledge of their local climates and particular needs related to agriculture. The PPS provides guidance while municipalities have the discretion to make decisions suited to their local conditions. In the process, they use the PPS definition of ‘Rural’ and ‘Agriculture’ and try to match according to their geography and infrastructure. While the official plans set out policies and goals to guide the land use, zoning bylaws set rules and that permit or restrict development. In the process, we find that some municipalities do not put in the effort to go a step ahead and subclassify rural parts of the municipality like ‘Rural Area’ into ‘Rural Land’ or prime agriculture into ‘Prime agriculture lands’. In some cases, they may not fully integrate the PPS policies and definitions, this is where the implementation process and the expected results diverge. Lastly, the usage of the above nomenclature representing the designations has not been standardized in the region. Therefore we can see many non-agricultural uses creep into agricultural lands due to variability in interpretation and designation.

3.4 Conceptualizing Rural: In order to successfully address the issues related to agriculture and rural environments there is a need to define the context of what is considered rural. The document titled ‘*How to Best Classify Rural and Urban?*’ is authored by Food and Agriculture Organizations of the United Nations (FAO). The document attempts to define rural through outlining the concept of ‘rural’ and how the trends are being observed in the OECD countries in applying the definitions for Rural and Urban areas, where ‘globalization’ has affected the structure of economies, specialization and the relationship between rural and urban.

Resultantly, there has been an effort to define what is rural through the evolution and interaction of rural-urban environments in the new century. There is no universally accepted definition of what may be considered as rural. However, the traditional way of perceiving “rural” as “agricultural” does not apply to developed countries (Pizzoli, E., Gong, X., 2007). Agriculture plays a major role in the economy of many developing countries, it is for this very reason that in non-OECD countries, “rural areas are still associated with agricultural activity and coincide with agricultural areas” (Pizzoli, E., Gong, X., 2007, p. 2). The paper tests the population density criterion propose by OECD to identify what is *rural*. What we see is that rural is not necessarily the character, but also associated with the type of uses found in a particular area. It is a combination of both character and use.

3.5 Rural Non-Agricultural Development: The paper “*Rural non-farm Development: Its Impact on the Viability and Sustainability of Agricultural and Rural Communities*” highlights the process of rural non-farm development, sheds light on the causes and how it affects agriculture activities. The public perception added with the academic push in the 1950s and 60s led to the focus on protecting farmland. Even though there are numerous policies regulating land

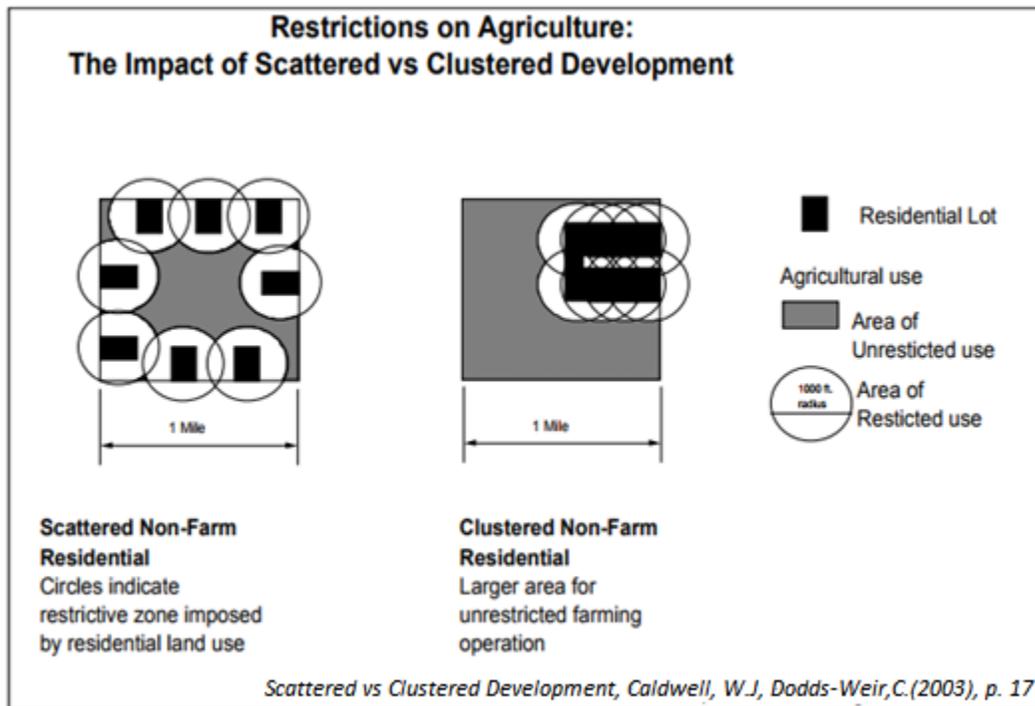
fragmentation, there are lots still being created in Ontario. According to the authors, each application processed for non-farm use on agriculture land has the potential to impact agriculture. (Caldwell, W. J., & Dodds-Weir, C (A), 2003)

Next, the authors highlight the phenomenon of agriculture land fragmentation and the underlying causes. The most common reason to sever a parcel of land is for a residential non-farm lot, where municipalities have provisions that allow such severances. There is still debate over the impacts of such lot creation. This debate can be balanced by reviewing the works that Caldwell & Dodds-Weir have mentioned. Non-agricultural activity can affect the “commercial viability” of farms (Caldwell, W. J., & Dodds-Weir, C (A), 2003). The authors argue that non-agricultural uses begin the proximity to agriculture activities plays an important role in understanding the detrimental effects of permitting such uses on a larger scale.

The increasing prevalence of non-agricultural related people and infrastructure near to or adjacent to farming lots create social conflicts as well. The combination of these effects discourages farmers to invest in the current farms or more importantly, move elsewhere. What this means is that management of the agricultural land base becomes complex and difficult when non-agricultural lots are prevalent. From another perspective, municipal servicing becomes difficult for scattered non-farm developments and it becomes increasingly costly and turns out as a burden for the local governments. To sum it all up the presence of such non-agricultural related lots and designations may negatively impact the agricultural viability. Rural non-farm development finds it's way to be scattered in the countryside and according to one study it has been identified that “scattered rural development had a larger sphere of influence than clustered development in a hamlet or village.” (Caldwell, W. J., & Dodds-Weir A), C 2003, p. 17).

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Figure 1.0 identifies the impact of scattered vs clustered development. Many restrictions surround the non-farm and farm-related development such as that of new lot creation. Such uses require tools such minimum distance separation (MDS) in order to mitigate the impacts on surrounding agricultural operations.



The main driver of non-farm development is residential lot creation and they emerge in a scattered pattern. This is directly proportional to the increase in severance activity and intensifying agricultural industry (Caldwell, W. J., & Dodds-Weir, C (B), C, 2003, p. 1). In Fig.1 scattered development is shown with the respective area of restricted use in an agricultural landscape usually representative of an MDS setback area. This leaves a larger footprint on the ground for potential agricultural use, thus making less land available for agriculture operations, mainly due to setback restrictions.

The illustration on the right represents a clustered development model where the non-farm uses, in this case, residential lots, are developed in an orderly fashion, concentrated in the

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part of a concession. From this perspective, the scattered approach clearly reflects the inefficient use of land. The implications are that scattered development will probably require a wider network of municipal services which is more costly as opposed to a closely-knit service delivery network for a clustered development.

The research also examines direct and indirect impacts of rural non-farm development and in the process analyses case studies in Ontario. The author points to (Caldwell, 1995), where it is established that the impacts are not only in terms of physical land lost but the restrictions that accompany such non-farm uses. In order to assess the impacts of rural non-farm development case studies were conducted in (Grey County, Perth County, Niagara Region, Waterloo Region). An assumption of the research was that the most frequently reported impacts will be considered as most significant impacts. It was found from the case study that the most commonly reported impact of rural non-farm development raised from minimum distance separation MDS. The results of the interview suggested that residential development in the agricultural area reduced the ability of farmers to adapt to changing methods of production. (Caldwell, W. J., & Dodds-Weir, C (B), 2003). Other impacts cited were “fragmentation of agricultural land; the changing demographic composition of rural areas; increased demand for municipal services resulting in increased taxes.”(Caldwell, W. J., & Dodds-Weir, C (B), 2003, p.67)

The rest of the research analyzes findings based on the perception of farm leaders and planners who reiterated the same impacts but expanded into more impacts such as conflicts arising from normal farm practices. The section concludes with the patterns of impacts on the agricultural community in Ontario. The common opinion was found that generally the presence

of non-farm development negatively impacts agriculture where the livestock sector was the most to face the effects.

The authors (Caldwell, W. J., & Dodds-Weir, C (A), 2003) establish that rural non-farm development negatively impacts the viability of agriculture but this trend of non-farm lots continues in the agriculture land. The authors point that scattered development due to lot-creation by either severance policies or establishment of non-farm uses either on or adjacent to an identified agricultural land base leading to a discontinuity in the agriculture land base across jurisdictions and within the jurisdictions the land base faces discontinuity (Caldwell, W. J., & Dodds-Weir, C (A), 2003). Such patterns either intentional or non-intentional, disrupt farming activities as established above by and negatively impacts the viability of agriculture (Caldwell, W. J., & Dodds-Weir, C (A), 2003). What has to be seen is what level of lot-creation will be detrimental to the *agriculture systems* in the long-run. The major research paper starts off where (Caldwell et al., 2003) have left off and tries to add more perspective by expanding the concepts, especially in the context of understanding the evolving types of non-farm uses that predominantly affect agricultural viability.

3.6 The Agricultural System: The concept of the *agricultural system* exists implicitly in Greenbelt Plan (2005) but not in the PPS (Caldwell, 2015), discusses the importance of the *agricultural system* for the contribution to improving policy aiming towards agriculture viability. The paper examines the concept of agriculture system with respect to influences such as the government; agribusiness; technical and professional expertise; the non-profit and community sector. It then links the components of the Agriculture System and concludes with determining the elements of the *agricultural system*. The time this paper was introduced, the idea of such a

system was in its nascent stages, where it was not fully developed but only conceptualized. However, the paper attempts to deliver what should be considered for policymakers as a rationale for an *agricultural system*.

3.7 Alternative Practices Policy Practices for Changing Agriculture Landscape: The Research paper “*Places to Farm: Alternative Practices and Policies for Ontario’s Changing Agricultural Landscape*” by Metcalf Foundation is a valuable resource that brings insight to the evolving issues in agriculture. The report sheds light on the strategic policy initiatives and the way forward to address the pressing issues in the agricultural landscape.

It does this by identifying areas where the strategic action would lead to informed land use planning process, policies and enables access to the land resource. The report focuses on the importance of regional food networks in ensuring a viable food industry and how creating opportunities with a policy change can help achieve that. The report is a compilation of innovative solutions sourced from industry experts, planner and government representatives.

Eventually, the protection of agriculture starts from securing the land base which is the primary resource for agriculture and it’s related operations. The report mentions that land conservation should not be the only initiative rather the community should strive for the expansion of farmland as an extended initiative.

The report focuses on seven areas for policy reform divided into two sections. In order to stay relevant to the research, we will focus on the first section. The following themes were found to be relevant for the current research:

- The report found that fragmentation of agriculture land base for non-farm uses led to reduced opportunities for peer exchange and mentoring

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- (POLICY 8) It was noted that severance minimums created barriers for agriculture and farming that was directed towards local markets as they tend to operate efficiently on lower acreage farms—*thus a blanket policy for severance should be avoided.*
- Canada does not have a national food policy that drives the whole country towards a unified vision to ensure self-sustainability and to support local food economy. Local food producers thus face competition from imported products. Canada's food trade are also in a net negative. Agriculture should be prioritized for promoting local food system through economic justification on a sound business-based model.
- Prioritizing agriculture through planning and policy: The report also recognized zoning for agriculture as a long-term solution.
- The report suggests major changes in the Provincial Policy Statement PPS strategy 1, whereby some practices such as aggregate extraction are still being permitted on agriculture land base. The report argues that such activities create a 'brief boost to the local economy' with short-term profits, removing 'key food-producing lands' (Metcalf Foundation, 2013). Even then it is not sure if the benefits are being spread to the local community or to some other country.
- The report recognizes that conversion of land is one of the greatest threat to farmland where it has been proposed that "exemptions for exclusions from the zoning need to be limited." (Metcalf Foundation, 2013, p. 14).
- Strategy 2 lays down the basis for developing an integrated food network. The research for this report concludes that agriculture communities are necessary for success in farming because farms do not work as isolated bodies and the farmers thrive within an arena of farms (Metcalf Foundation, 2013). Agriculture communities in this context mean

equipment repair, farm supply and livestock veterinarians (Metcalf Foundation, 2013).

The strategy also suggests that rural housing should be clustered in order to access services and support easily. This point has been raised by (Caldwell, W. J., & Dodds-Weir, C, 2003) where the case for rural lot clustering was suggested. This can be expanded as a policy recommendation for future provincial plan amendments. To strengthen agriculture communities as an integrated system.

- Integrated services in agricultural communities create strong communities. (Metcalf Foundation, 2013)

This report builds an excellent case in support of the proposed *agricultural system* by OMAFRA that focuses on the agri-food network as one of the two main components. That is an equivalent of a *regional food network* as suggested by this report.

4.0 Document Review

Official documents and guidelines on non-agriculture permitted usage were reviewed. Most of the sources were official land use planning documents used by the local municipalities in the GGH. They included official plans, agriculture strategy documents, municipal maps, zoning bylaws, zoning schedules and most importantly the provincial policy statement was consulted in the document review and linked with the academic literature review to provide an understanding of the current land use planning system and how that fits into the local governance framework. Official documents for the target areas were checked for consistency for various definition between the upper tier municipalities and the provincial policy statement (PPS). Finally, the nomenclatures were evaluated for their area-specific use. The results were enlightening and will be discussed in the analysis section.

4.1 Provincial Policy Document and OMAFRA Guidelines: Both the Provincial Policy Statement (PPS) and the OMAFRA Guidelines were researched in tandem as the PPS guides the OMAFRA document and draws policy that is consistent and enables the application of the *agriculture system*. The planning regime in Ontario has set out policies and plans that give class 1-3 protection over lands classified as type 4-7. This gives precedence to prime agriculture land in ‘Prime agriculture area’ over lower capability lands. We will now see how the policies that drive these designations, permit or restrict activities in the areas defined above and how that may affect agriculture. For this aspect, the ‘*Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas*’ by OMAFRA was consulted. It is a guiding document to aid decision makers and planners interpret policies in the PPS on permitted uses and expands them for a comprehensive understanding and application. PPS Policy section 2.3.3 guides the policy for permitted uses on prime agricultural areas. The criteria for the uses permitted in prime agricultural areas are specifically derived from PPS policies and definitions. One of the criteria aims towards, securing the land base for agriculture. The following document review sections deal primarily with designations.

4.1.1 Rural Area: According to the PPS (2014) ‘Rural Area’ is “a system of lands within municipalities that may include rural settlement areas, rural lands, prime agricultural areas, natural heritage features and areas, and resource areas.” (Ministry of Municipal Affairs and Housing [MMAH] (A), 2014, p. 48) Whereas ‘Rural lands’ are “lands which are located outside settlement areas and which are outside prime agricultural areas.” (MMAH (A), 2014, p. 48). So quite clearly ‘Rural land’s are lands that may not come under the protection that prime agriculture areas.

4.1.2 Prime Agriculture: When we review the definitions of Prime agriculture area in the (MMAH (A), 2014) they are “areas where prime agricultural lands predominate. This includes areas of prime agricultural lands and associated Canada Land Inventory Class 4 through 7 lands” as opposed to ‘*Prime agricultural lands*’ those are only limited to “specialty crop areas and/or Canada Land Inventory Class 1, 2, and 3 lands, as amended from time to time, in this order of priority for protection.” (MMAH (A), 2014, p. 46).

A clear distinction has to be established between ‘prime agriculture area’ and ‘prime agriculture lands’ as at many instances planners and decision makers may use these terms interchangeably and the implications of such assumptions are far-reaching. Even in the official plans, schedules and maps of many municipalities, *prime agriculture area* policies were used as blanket term even for *prime agriculture lands*, which may require special policies in certain regions due to their higher level of importance.

4.1.3 Agriculture Protection Policy: The PPS is the primary document which guides all land use planning in the province for agriculture protection. Secondly, provincial plans also reiterate this policy and strengthen the implementation of this concept. In this way the PPS works in tandem with provincial plans. Policy 1.1.5.8 of the PPS states that “agricultural uses, agriculture-related uses, on-farm diversified uses and normal farm practices should be promoted and protected on rural lands in accordance with provincial standards.”(MMAH (A), 2014, p. 11). This policy highlights the importance that the protection of agriculture should be considered as a minimum standard even in rural lands. Permitted uses on rural lands allow more activities as compared to the uses in prime agricultural areas. The implications of this will be discussed further in this paper.

4.1.4 Agricultural related activities: In the OMAFRA guidelines, *agriculture-related* uses are listed in addition to *on-farm diversified uses*. These uses if secondary may carry implications if allowed on *prime agriculture land* when a particular area has not been specifically identified as ‘Prime Agriculture Land’ but only as ‘Rural Area’, or any other designation that is used to encompass the rural landscape either comprehensively or otherwise in local planning documents and schedules. This rarely happens in the region, what we may view are cases where adjacent non-farm uses may directly affect the operations or uses on prime farmland. Especially, when non-farm use lots are created. This affects the primary agriculture activity especially when seen from economic productivity perspective as the management of land becomes costly due to loss of economies of scale as the expansion perimeter becomes limited.

4.1.5 Permitted Non-agricultural Uses: We will now focus on non-farm uses permitted in or around prime agriculture areas. The effect of which will be discussed later in this paper through case studies. Section 3.2 of the Permitted Guidelines document deals with ‘Limited Non-Agricultural Uses in Prime Agricultural Areas’. Non-agriculture uses go beyond agriculture-related and on-farm diversified uses. On rural lands, PPS Policy 1.1.5.2 permits many non-agricultural uses such as “On rural lands located in municipalities, permitted uses are: a) the management or use of resources; b) resource-based recreational uses (including recreational dwellings); c) limited residential development; d) home occupations and home industries; e) cemeteries; and f) other rural land uses.” (MMAH, 2014, p. 10). PPS Policy 2.3.6.1 outlines the circumstance where non-agricultural uses could be considered as a permitted use in prime agricultural areas. The criteria is that “Any non-agricultural uses must be non-residential, outside of specialty crop areas and meet the minimum distance separation formulae setbacks” (OMAFRA, 2016, p. 39). The usage of MDS system is widespread and the immediate benefits

have to be acknowledged but it only deals with the symptoms of the conflicting uses. It does not cure the problem of separating use effectively. The MDS set back creates a breakage in the land base.

An important factor to note is that policies should be applied and considered from a community-wide impact context. This perspective is essential in ensuring that the new non-agricultural use is compatible with the long-term vision of the area. The policy also directs municipalities to carry out an assessment for mitigating impacts such as the AIA. Municipalities should be a step ahead and ensure that such ‘Rigorous assessment’ process takes place before making decisions for permitting non-agricultural uses in agricultural areas.

4.1.6 Limited Non-Residential Uses In prime agricultural areas: according to the document limited non-residential uses are such uses that include “commercial, industrial, institutional or recreational uses but exclude residential uses” (OMAFRA, 2016, p. 40). The term ‘limited’ can be interpreted as a reference to single use.

4.1.7 Impact Mitigation: Section 3.2.4 of the OMAFRA guidelines deal with cases where impact mitigation is required where non-agriculture uses are permitted in prime agriculture areas or in surrounding areas. PPS Policy 2.3.6.2 requires “Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible.” (MMAH (A), 2014, p. 26). Based on the use, non-agricultural uses may initiate impact mitigation process. According to section 3.2.4, Impact Mitigation “Impact mitigation for small-scale, non-agricultural uses that do not significantly conflict with agriculture may require a localized approach (e.g., dust suppression, fencing, appropriate lighting, etc.)” (OMAFRA, 2016, p.41).

4.2 Agriculture System in Ontario: (Caldwell, W. J., & Dodds-Weir, C, 2003)

recognizes the importance of agriculture viability and it is under these same circumstances that the *agricultural system* is being proposed and aims to address the issues caused by non-farm uses and non-farm lot creation which breaks the continuity of the land base. The province has initiated an approach to planning agriculture in such direction. The approach is based on the concept that land available for farming and the agri-food network needs to be integrated together for the long-term success of the new policy approach. This approach has been developed in the document titled: “Implementation Procedures for the Agricultural System in Ontario’s Greater Golden Horseshoe” by OMAFRA which is currently in draft stages, undergoing consultations from the local municipalities. However, many of its proposed policies are being already incorporated and implemented across the region through the provincial guidelines and plans.

The first part of the document explains the *agriculture system* approach in detail and describes the process to identify the land base and the components of the *agri-food network*. It has two major components: (i) The agricultural land base and the (ii) agri-food network.

“The agricultural system approach aims to improve farmland protection and create conditions where the agri-food system can prosper” (OMAFRA, 2017, p. i). The approach also recognizes that rural lands in agriculture “help create a continuous land base, link prime agriculture areas...” (OMAFRA, 2017, p. i). Such links are necessary for ensuring the viability of the agriculture in the region. This is the first time an official document has stated the importance of a continuous land base for agricultural viability.

The second part (Part B) of the document explains the implementation process of the *agriculture system*. The outcomes of the *agricultural system* approach are:

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1. “Active planning for agriculture and rural economic development based on reliable mapping, data, and tools;
2. Improved viability of agriculture and growth of the agri-food sector;
3. Better protection of the agricultural land base;
- 4. *Increased consistency and certainty across municipalities;***
5. Reinforcement of the synergies between agricultural, natural heritage and water systems, as outlined in provincial policy;
6. Collaboration between the province, municipalities, farmers and businesses with a common interest in a strong agri-food sector;” (OMAFRA, 2017, p.7)

The document comprehensively provides the rationale for an agricultural system in the region. It recognizes that fact that protection policies for agricultural land varies across the municipalities in the GGH, where “similar land may be designated prime agricultural area in one municipality and designated rural lands across the municipal boundary, even when soils and other land use characteristics are comparable” (OMAFRA, 2017, pp. 12-13). This may point to inconsistent land use designation accompanied by non-standardized land mapping/classification techniques. It is assumed that planning decisions will be consistent with the PPS, however, there may be a difference in policy interpretation due to varying study methodologies and to accommodate varying growth pressures, thus implementation may vary across the region as well.

Agricultural system approach recognizes the importance of rural lands in the regional food network. “Rural lands may link prime agricultural areas into a more continuous land base and/or support assets that are part of the agri-food network” (OMAFRA, 2017, p. 14), therefore

while implementing the *agricultural system* policies the focus should be on maintaining the base with rural lands. At one point the document aims to direct municipalities to ensure that the mapping of the land base is consistent across the municipalities, through a refinement process and it would “focus on cross-boundary discrepancies with the neighboring municipalities.” (OMAFRA, 2017, p. 31)

The most notable part that the document highlights the approach where the *agriculture system* differs from traditional land use planning approaches in Ontario in the following ways:

1. “It aims for continuity of protection of prime agricultural areas across the GGH using common nomenclature for land use designations;
2. It recognizes the important role of rural lands in agriculture and supporting elements of the agri-food network;
3. It reinforces the need to integrate agricultural viability considerations with farmland protection;” (OMAFRA, 2017, p. 12)

The implementation procedures in the OMAFRA document are intended to support the PPS policy on designating *prime agricultural areas* and also intended to provide ‘insights for areas beyond the GGH.’ (OMAFRA, 2017. p. 8). It is interesting to note that the focus on the *agricultural system* is to bring a comprehensive network and a leveled platform for implementation of agriculture policy to achieve agriculture viability. This is highlighted by the recognition of the need to use common nomenclature and land use designations especially for prime agricultural areas in order to: “sustain the agricultural resources for long-term across municipal boundaries; direct non-agricultural uses away from *prime agriculture areas*; use a

common approach across municipalities and land use plans....in terms of farmland to be protected, avoidance of conflicting uses, permitted uses....” (OMAFRA, 2017, p. 13)

Section 3.1.2.1 of the document presents policies related to nomenclature; while it is only recommended to use common nomenclature for land designation. The list of suggested common nomenclatures is as follows: “specialty crop areas, prime agricultural areas, and rural lands within the agricultural land base Outside of the agricultural land base: rural lands” (OMAFRA, 2017, p. 35)

It is also advised that conformity with *agricultural system* policy to be introduced through the municipal comprehensive review MCR. The document suggests that the implementation procedures of the *Agriculture System* must be consistent with and complement the provincial plans such as the *Growth Plan and the Greenbelt Plan*. The document does not explain the process of linking these plans the *agriculture system* in the decision-making process. The final version would possibly address this issue after refinement. Nonetheless, it lays down the basis for an important step towards achieving the ambitious goals of integrating and mobilizing the region's resources in a consistent manner.

4.3 Agriculture Land Policy Consultation—New Brunswick: The policy document reflects on the results of a policy consultation exercise conducted by the department of agriculture and fisheries (DAAF) in 2016. DAAF conducted the exercise through public and stakeholders input. The results were categorized into two major themes *Protection and Preservation Themes, Land Expansion and Sustainability Themes*. The recommendations have relevance for application in Ontario as well. The most important and the common concern raised was the removal of topsoil from prime agricultural land in New Brunswick. Policy

recommendation: Prohibit the removal of topsoil from higher capability lands. Encroachment on to the farmland was another important issue identified, however, encroachment is not that prevalent in Ontario especially not in the GGH. A comprehensive list of compatible and non-compatible list of ‘activities and development’ representing non-farm uses should be formulated. Ontario has this list outlined in the Permitted Use Guidelines document by OMAFRA. However, that list needs to be updated at reasonable intervals. The municipalities should formulate their own list and categories reflecting their local environment. Table 3.0 shows a similar list.

The policy document points to some pressing agriculture-related issues that New Brunswick is facing and indeed there is a lesson to be learned. It is interesting that the report has identified idle farmland as a resource that needs to be brought back to use, as such lands have the potential to be converted by developers for non-farm uses. The potential can be channeled in a better directions by conserving these lands and utilizing them for managing and maintaining links for the agricultural land base. ***A specific policy should be introduced in Ontario and could be added to the Growth Plan in order to better manage such lands.***

Lastly, a relevant policy recommendation for application in Ontario would be that municipalities should identify public utility corridors specifically in agricultural and rural areas to reduce farmland impact. The administrative framework is different in Ontario where public works and utilities are managed by separate corporations and it varies across the region. Therefore a mapping exercise would be recommended in order to better support the *agri-food network* without conflicts.

5.0 Case Study

4 lower-tier municipalities were chosen to across the GGH to evaluate the consistency in official plans, land-use schedules, designations, agriculture and rural strategies. They were selected based on the (i) dominance of agriculture land farming activity in the area (ii) based on the existence of prime agriculture lands (iii) based on the availability of administrative staff and planners for an interview (iv) availability of documents that would guide and support agriculture and rural policy implementation (v) the selected areas that were evenly spread out geographically in the Greater Golden Horseshoe region as East: City of Pickering (Region of Durham) Central East: Town of East Gwillimbury (Region of York) Central-West: Town of Caledon (Peel Region) and West: Township of Wellesley (Region of Waterloo) respectively.

The aim of the case study desk review was to identify and evaluate the policies that drive the official plan toward agriculture protection and to what extent are they consistent. Next, the desk review evaluated the land use designations, their uniformity, and comprehensiveness and how are they interpreted. The case study desk review was used to evaluate the designations and zoning bylaws and the degree to which they are used to regulate the permitted non-agricultural use. Lastly, the findings of the desk review were linked with the interview responses to create a comprehensive framework for policy formulation and implementation in order to address the gaps in policy action.

5.1 Evaluation of Case Study Areas: For the municipal document review and case study 4 municipalities were selected as follows:

- (i) Town of East Gwillimbury (York Region)

- (ii) Town of Caledon (Peel region)
- (iii) City of Pickering (Region of Durham)
- (iv) Township of Wellesley (Region of Waterloo)

5.1.1 City of Pickering: Pickering is a municipality in the Region of Durham which has a unique landscape with a sound policy vision based on ecological, urban and rural systems that are interrelated. It is a place which is full of opportunities and potential. The land use framework is unique as well, as it has distinguished key areas of growth from rural settlement areas while also setting policies to protect natural heritage. The city follows the mapping and land classification as directed by the Region of Durham. Rural and agriculture areas are delineated through an official plan review process. Some of the challenges the municipality faces in the rural area are when agriculture use comes into conflict with permitted non-agriculture use.

According to the planner interview residents of rural areas complain about farming activities, especially about pesticide use near a subdivision dwelling. Also, when rural roads share traffic with slow-moving vehicles that are used in agriculture operations such as tractors, on the other hand, there are complaints about noise from special and seasonal events on or near agriculture areas. (Jacobs. D, phone, November 29, 2017)

In order to mitigate the effects of non-farm use buffers are used and where applicable minimum distance separation MDS is also applied. The provincial plan review was an opportunity to balance the objective of protecting farmland and national heritage areas. Mapping has been refined to apply firm boundaries. The current official plan is under a review process, this would enable the municipality to adjust and conform to the updated definitions and

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designations in the PPS and the provincial plans. As this is a region-wide process, this would ensure uniform designation and enable consistent land use planning practices.

Policy recommendations from the interview were as follows: The ministry and the province need to go beyond the official process and perform a “ground-proofing” exercise where the evidence-based approach is applied. The mapping process needs to be direct and involves site-based evaluations instead of depending on purely digitized maps (Jacobs. D, phone, November 29, 2017).

Moreover, the introduction of any new plans in this case the *agricultural system*, the authorities should involve the municipality in the development process through workshops or a formal consultation process where the local government which is more informed about the nature of activities and the evolving dynamics (Jacobs. D, phone, November 29, 2017) this would provide valuable input and accurately represent the conditions of the local agricultural systems.

Official Plan Designations: The official plan was comprehensive and detailed. The Official Plan schedules clearly delineate *Agricultural Areas* and *Countryside Areas*. The official plan does not define Prime Agricultural Areas, Rural Areas and does state specific policies for their protection in a separate section. However, page 75 of the OP lays out policies for *Agricultural Areas and Oak Ridges Moraine Countryside Areas* which contains policies for the protection of the Agriculture land base and agriculture-related uses. Table 11 lists the permitted uses according to the regulations in the Oak Ridges Moraine Plan. It also states that “Restrictions and limitations on the uses permissible, arising from other policies of this Plan, will be detailed in zoning by-laws” (Pickering, 2017, pp 77-78). The Official Plan has been under review and the

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new plan conforms with all the provincial legislation, so we hope to find updated policies regarding rural and the agricultural landscape.

Permitted Non-Agricultural Uses: Section 16.6 of the official plan deals with non-agricultural uses on lands designated Agricultural Areas, Open Space System or Oak Ridges Moraine Countryside Areas where ‘Agricultural Report’ is required for permitting such use and outlines the regulations. Quoting the planner at The City of Pickering, some examples of permitted non-agricultural uses on designated agricultural lands include “forest, fish and wildlife management, conservation, infrastructure, and existing lawful uses. In the Duffins-Rouge Agricultural Preserve Area (part of the Central Pickering Development Plan), agricultural research by colleges and universities are permitted, provided that the research does not jeopardize the integrity of the agricultural lands. Illegal dumping creates the most complaints from farmers where farmland borders urbanized areas.” (Jacobs. D, email, December 6, 2017)

Zoning for Agricultural and Rural: The planner pointed out that Pickering has a separate zoning bylaw document for rural and agricultural areas which is not available online. It is titled “Rural zoning by-law: Bylaw 3037”. It regulates lands outside the urban area. Upon review, the bylaw document was comprehensive and detailed. Many sections have been carried forward as they have from the past. Rural Agricultural Zone (A), Village Zone (V) Greenbelt Conservation Zone (G) regulate the rural and agricultural areas in Pickering (Pickering, 2004). Upon reviewing the relevant sections the permitted uses in Rural Agricultural Zone (A) include: Home occupation, Agricultural operations considered as general agriculture, (facilities for the raising of fur-bearing animals, kennels, and swill fed pigs are not permitted), and ‘Accessory Agricultural Residential’, Recreational, Institutional and Business such as stable and riding academies, animal hospital and veterinary establishments are permitted (Pickering, 2004).

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Outdoor theaters and related activities in this category are also allowed while keeping a cap on the number of persons. (Pickering, 2004)

Under the Village Zone (V) Section 7 permitted uses are: Residential, Commercial (hotel, motel, Type-A retail store automobile service station, Service Institutional and Industrial uses are permitted given that they follow the proper area requirements, setbacks, elevations, licenses, permits and certificate of occupancy (Pickering, 2004).

Uses permitted under section 14 Greenbelt Conservation Zone (G) include: “All recreational use of non-commercial nature, Forestry, reforestation, conservation and agricultural uses.” (Pickering, 2004).

5.1.2 Town of East Gwillimbury is a municipality of York region. It is characteristic of a thriving urban center surrounded by a wider rural area. The municipality is predominantly rural and much of the area falls under the Greenbelt Plan and the Oak ridges Moraine plan. The rural and agricultural lands are delineated and identified through an OP review process. Tarah Coutts who is a local planner stated that zoning bylaws regulate the permitted uses in rural areas and where an issue arises zoning bylaw review process is initiated to better define the area and the activities that need to be regulated. (Coutts. T, phone, November 28, 2017). The zoning bylaw of the municipality is under a review process where according to the new zoning bylaw there will be integration with the provincial plans.

Zoning for Agriculture and Rural: The Rural (RU) Zone blankets the whole agricultural land base and applies to lands designated Prime Agricultural Area, Holland Marsh Specialty Crop Area, Rural Area and Agricultural/Long Term Growth Area in the Town’s new OP (Gwillimbury, 2017). The zone Agriculture (A) has been replaced by (Rural) (RU). This is an

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interesting case where one single zone covers many designations. It is helpful for decision-makers and planners as it can comprehensive address the issues and reduce the complex overlap and interpretation of policies.

Official Plan Designations: The official plan document outlines the policies that direct land use planning, especially the permitted uses and restrictions that regulate the rural areas and agriculture as a whole. Section 4.11.1 General Policies for the Protected Countryside, guides the municipality under guidelines from Greenbelt Area (Protected Countryside), The Rural Area and Prime Agricultural Area Designations which come under this policy section. As outlined in Schedule C of the official plan maps, it illustrates the Greenbelt Protected Countryside within the Town through “the establishment of five land use designations, all of which constitute the Protected Countryside: i) Holland Marsh Specialty Crop Area; ii) Prime Agricultural Area; iii) Rural Area; iv) Greenbelt Settlement Area; v) Greenbelt Hamlet.” (East Gwillimbury, 2014, p. 77). This is indeed a comprehensive method to classify cross jurisdictional policies. The Oak Ridges Moraine Countryside Area designation also encourages the protection of agriculture. The definitions for rural and agricultural areas are consistent with the PPS. Sections 4.11.3 Rural Area clearly defines the area. Prime Agriculture area policies are mentioned but the definition is not provided.

Permitted Non-agricultural uses: Section 4.12.4.4 Recreation Areas existing as of November 17, 2001, and identified on Schedule C may be permitted to expand or change their operations on that portion of their lands designated Oak Ridges Moraine Countryside. It is interesting to note that under section 4.9.8 Small-scale structures for recreational uses (such as boardwalks, footbridges, fences docks and picnic facilities) are permitted within in all land use

designations with the regulation that the negative impacts on these features shall be minimized.

(East Gwillimbury, 2014)

5.1.3 Town of Caledon: (Munro. K, phone, November 30, 2017)

Caledon is a predominantly rural municipality in the Region of Peel. It is leading the way in setting the benchmark in rural planning by incorporating a comprehensive planning policy framework. Caledon has multiple residential centers and rural settlements areas. The municipality is facing population growth pressures, more importantly, the rural community converges with industrial areas. The municipality comes under the policy area for the Greenbelt Plan and the Oak Ridges Moraine plan that channel the agricultural and rural area policies. Caledon also happens to have a vast area of Prime Agricultural Land. This creates a unique situation that requires extensive planning with a strict regulatory framework to effectively separate uses, protect the environment while facilitating the local economy and accommodating growth. The rural and agricultural lands are identified and updated through the official plan review. In addition, a conformity exercise was carried out in the previous years. Caledon is one of those municipalities where agricultural land base mapping has been carried out comprehensively, which is a step towards the proposed *agricultural system*. However, it is worth noting that the land evaluation system criteria varies across the region, where the point based system is not standardized.

Zoning for Agriculture and Rural: The zoning bylaw contains many sections where specific policies and criteria exist for permitted usage especially for non-agricultural uses. Rural and Agricultural zones have zoning bylaws stacked together for permitted usage represented by a checklist table in an organized manner. Environmental Management and Forest Management

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related uses are not allowed in all agricultural and rural zones A1, A2, and A3 (Caledon (B), 2017). Oak Ridges Moraine conservation area policies apply separately in the agriculture areas which comes under that zone. Hobby Farms are only allowed in Small Agricultural Holdings (A3) zone (Caledon (B), 2017). Transportation, Infrastructure, and Utilities related usage are not permitted in A1, A2 and A3 zones but only allowed in the Oak Ridges Moraine conservation area (Caledon (B), 2017).

Official Plan Designations: The official plan is detailed and organized. It has prime agriculture areas defined and policies outlined in accordance with the PPS and the provincial plans. The policies are also more restrictive and are not merely treated as minimums. The agriculture designations reflect the variety and mix of uses found in rural Caledon. The official plan also goes a step further and aims to limit fragmentation and strives to provide opportunities for consolidation. The official plan policies are informed in a way that respective bylaws are mentioned under specific sections. Prime agriculture area designation has the largest Agriculture related land base, followed by General Agriculture and Rural Area.

Permitted Non-agricultural uses: Aggregate extraction is one of the major permitted non-agricultural use. Other common uses outside the designated settlement include Golf courses and rural non-farm related residential lots. There are reported issues of minimum distance separation (MDS) impacting options for the locating of agricultural development based on neighboring development, Rural traffic either local or not, contribute to delays in transport related to farming. (Munro. K, email, December 11, 2017)

5.1.4 Township of Wellesley:

Wellesley is a municipality in Waterloo region. The agriculture industry is not intensive. It includes mixed farming activity. There are a few large crop farms the rest include, goat cheese processing, dairy and poultry farms. (VanderBaaren. G, phone, December 7, 2017). However, a vast area of the municipality has Prime Agriculture designation that can be utilized for the future. The township is home to environmental features under the *Greenlands Network*.

Official Plan Designations: Official Plan designations in Wellesley are unique and represent the character of the municipality. The designations represent the mixed uses found in the rural landscape. According to the planner interview, the municipality is home to Mennonite community where they are located in lots under rural area and prime agricultural area designations. They reside in rural clusters. Lots within the cluster are considered as *agriculture uses*. Each cluster is regulated by a zoning bylaw amendment. (VanderBaaren. G, phone, December 7, 2017). The Protected Countryside designation has a continuous band of agricultural lands and environmental features that are permanently protected. The official plan clearly defines Prime Agricultural Areas and rural area. The definitions are not comprehensive but the list is not exhaustive. It meets the needs of the planning department.

Zoning for Agriculture and Rural: The zoning in Wellesley allows Rural Mixed-Use/Agricultural Clusters (MAC) for the local community (Wellesley (B), 2017). Clustering allows to conserve space and provides a well-knit community that is easily serviceable. Each cluster is regulated by a zoning bylaw amendment. Agriculture is regulated by General Agriculture A1, Small Lot Agricultural (A2) and Agricultural Institutional (AIN) zoning bylaws (Wellesley (B), 2017).

Permitted Non-agricultural uses: General policies for Permitted Non-agricultural uses exist in the OP where ‘minor’ intensification of existing non-agricultural uses are permitted. The town aims to promote environmentally sustainable agriculture through *Environmental Farm Plans*. Recreational and Tourism related uses are allowed in Rural Area designations. Policy 3.8.4 allows minor expansion of rural settlement areas under the Protected Countryside designation. (Wellesley (A), 2015). Secondary uses are permitted on lands under the Prime Agricultural Area and Rural Areas; this generally includes dry-industrial use and on-farm activities that would supplement farm income, it could be industrial related uses such as repair with ancillary retail (Wellesley (A), 2015). Group homes, home occupation industries such as woodwork and furniture manufacturing by the local community is allowed (VanderBaaren. G, phone, December 7, 2017). Animal clinics, cemeteries, small-scale school and church are allowed to preserve and “support the historical, social and cultural needs of a unique segment of the Township’s community” that also relies on horse-drawn vehicles as primary means of transport. (Wellesley (A), 2015, p. 36) Issues raised from non-agriculture activity and uses include country road wear and tear from high volume non-local traffic. (VanderBaaren. G, phone, December 7, 2017)

6.0 Discussion & Analysis

6.1 Key Findings:

- Farming types are evolving that require flexible environments to carry on their operations successfully, this includes on-farm diversified uses.
- Most of the municipalities are in transition phase—updating their official plans and planning documents in conformity with the updated provincial plans and legislations.

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- Municipal land mapping and related studies are not standardized across the region.
- Cross-jurisdictional discrepancies exist in land use designations in GGH.
- Some municipal jurisdiction were found to have a mixed landscape with prime agriculture land-rural area overlap. A distinction should be made based on ‘agricultural land base’ factor.
- The majority of non-farm lots are residential use.
- Non-agricultural uses lead to MDS setbacks which contributes as a major impact on the agricultural land base.
- Municipalities are informed of the recurring non-compatible uses, however, no formal list of potential non-compatible/nonagricultural activates exists to support the decision-making process.
- Aggregate extraction—is prevalent on prime agriculture lands in the GGH.
- Natural heritage conflicts with agriculture land base are common.
- An overlap in rural and agricultural definitions was found in the case studies, with provincial plans such as the Growth Plan and the Oak Ridges Moraine.
- Some municipalities use a single zone category to cover a wide number of uses.
- Farm lot size has increased in the past decade.
- All current land mapping activities in Ontario are based on CLI land classification. The updated Land Suitability Rating System (LSRS) has not been integrated.

Table 1.0 List down all rural and agricultural designation compiled from case study areas for comparison purposes. The designations are mostly customized to area-specific needs. This does not necessarily mean that lands across adjacent municipalities are designated in the same

manner. Having said that, it is important to note that given suggestions by OMAFRA draft document for the *agricultural system*, point to implementing uniform nomenclature. It suggested the nomenclature should follow these designations: “specialty crop areas, prime agricultural areas, and rural lands within the agricultural land base, Outside of the agricultural land base: rural lands” (OMAFRA, 2017, p. 35). What needs to be seen is how such designations will use a standard criteria in the implementation process.

Table 2.0 compares policies across the case study regions for prime agriculture areas, rural areas and permitted non-agricultural uses. It was found that Prime Agriculture Lands/Area was not defined comprehensively in the official plans of some municipalities. Policies related to rural and agricultural land uses were consistent with the PPS— some zoning bylaw documents related to rural and agricultural areas were not comprehensive. They seem to work at a bare minimum. Moreover, the bylaws were not up to date and not in line with recent policies. Decision making by planners under such circumstances does not reflect responsible organizational practices. It was found that policies for impact mitigation existed for non-agricultural uses. Such policies are based on the conventional methods such as MDS and zoning requirements—and Agricultural Impact Assessment (AIA) should also be made mandatory for permitting such uses. Non-agricultural uses can be discouraged by levying additional taxes that would go towards mitigating the impacts. What needs to be done is to ensure that impact of such non-agricultural activities should be mitigated through more efficient methods such as lot clustering or not permitting such uses in the first place.

Table 2.0 also shows that municipalities have not defined a comprehensive list of non-agricultural and non-compatible uses. Municipalities are informed of the recurring non-

compatible uses, however, no formal list of potential non-compatible/nonagricultural activities exists to support the decision-making process. OMAFRA has this list outlined in the Permitted Use Guidelines document. However, that list needs to be updated at reasonable intervals, while local municipalities should have their own specific list representing the local character and use.

6.2 Policy Areas Identified/ Recommendations:

The aim of the research was to bring all possible aspects of the implications related to the issues identified, all effort has been made to identify key policy areas that need to be highlighted and considered for reform and/or introduce a new policy. There were common themes identified throughout the research and they are listed below with the recommendations highlighted in bold:

1. The usage of the nomenclatures related to ‘Rural’, ‘Agriculture’ representing the designations have not been standardized in the region. Therefore we can see many non-agricultural uses creep into agricultural lands due to variability in interpretation and local mapping.—

Balance the specific and broad nomenclature and define them clearly based on a universal language with validation across the administrative hierarchy.

Aim to direct municipalities to ensure that the mapping of the land base is consistent across the municipalities, through a refinement process and it would “focus on cross-boundary discrepancies with the neighboring municipalities.” (OMAFRA, 2017, p. 31)

2. Municipal servicing becomes difficult for scattered non-farm developments and it becomes increasingly costly and turns out as a burden for the local governments. The

presence of such non-agricultural related lots and designations may negatively impact the agricultural viability.—

Servicing to non-agricultural uses should be limited to suburban or urban areas.

Municipalities should identify public utility corridors specifically in agricultural and rural areas to reduce the impact on farmland. The administrative framework is different in Ontario where public works and utilities are managed by separate corporations and it varies across the region. Therefore, a mapping exercise would be recommended in order to better support the *agri-food network* without conflicts.

3. The adoption of the MDS approach has created silos of scattered uses across the region. It was found from the case study that the most commonly reported impact of rural non-farm development raised from minimum distance separation MDS.—

Adoption of MDS should be limited and used in special cases where permitted non-compatible uses cannot be avoided. The use of MDS should be flexible and systematic-- factoring in the footprint of the use being separated and the amount of land foregone under the separation.

4. It was noted that severance minimums created barriers for agriculture and farming that was directed towards local markets as they tend to operate efficiently on lower acreage farms—

A blanket policy for severance should be avoided. A change in provincial legislation and policy documents is suggested because these policies follow a top-down approach. A feedback loop should also be introduced that reduces the time delays associated with

structural rigidity in the implementation and reform process. Municipalities should not have to wait for years of reviews.

5. The report recognizes that conversion of land is one of the greatest threat to farmland.

“Exemptions for exclusions from the zoning need to be limited.” (Metcalf Foundation, 2013, p. 14).

A proactive hybrid approach is suggested and a leap forward to new forms of zoning that should have research and evidence to support it. Sometimes, a broader approach of using a single agriculture zone may not accurately represent the uses in an area, a sub-zoning tier-based approach can be adopted where the additional uses can be outlined in a progressive manner expanded from a single zone. A single zone approach creates a uniform environment for provincial policies to be adopted with similar interpretations. Whatever approach is adopted it should be based on informed input from local farm operators, stakeholders and through a public engagement process—based on ground realities and analyzing possible future trends.

6. Municipalities do not define or identify agricultural and rural land use designations clearly in their official documents—

A clear distinction has to be established between ‘prime agriculture area’ and ‘prime agriculture lands’ and ‘General Agriculture’. Workshops can be arranged to educated planners for more informed decision-making.

Municipalities should update their ZBLs periodically, to better reflect the agriculture industry of current times.

7. Lack of interactive consultation process while developing strategy documents—

The ministry and the province need to go beyond the official process and perform a “ground-proofing” exercise where the evidence-based approach is applied. The mapping process needs to be direct and involves site-based evaluations instead of feedback from digitized maps.

The introduction of any new plans in this case the *agricultural system*, should follow a formal consultation with the municipality in the development process through workshops as they are more informed about the nature of activities and the evolving dynamics (Jacobs. D, phone, November 29, 2017) this would provide valuable input and accurately represent the conditions of the local agricultural systems.

8. Non-agricultural uses are permitted on scarce prime agricultural lands: Either due to designation discrepancies or time lag in the update process of planning policy—

Municipalities should be a step ahead and ensure that such ‘Rigorous assessment’ process takes place before making decisions for permitting non-agricultural uses in agricultural areas.

6.3 Analysis

We will now use force field analysis to find to systematically balance the policy recommendation and regulatory issues that were raised for the proposed *agricultural system*. Table 4.0 has the variables and factors organized into columns. Simply by identifying the driving forces and restrictive forces, the decision making becomes transparent. The next step is to place points to the identified factors. For the purpose of being realistic and due to lack of data on the

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variables we will carry out an analysis exercise to reflect on the usefulness of force field analysis. Such type of analysis makes the decision-making team re-evaluate their options and weigh their strengths and weaknesses. Allowing them to go back to the drawing board once the results of the analysis are processed.

For the case of the *agricultural system*, a few factors stood out for the driving forces: There is a lack of regional or provincial agri-food network either identified or established under a regulatory body or a policy plan. This is needed in order to tap into the potential of the regions food-producing economy. Next, the agricultural land base is facing pressures from conversion and through competition from permitted non-agricultural activities. Those are the result of inconsistent policy implementation/interpretation and lack of well-defined land use policy leading to uninformed decisions. The restraining forces include the lack of a robust policy implementation framework; there is no direct feedback loop to tell how well the policy has progressed; the implementation will take time due to the structural rigidity of the planning conformity and review process; Lack of clear implementation and transition strategy. Policy without a strategy does not produce results. It creates the potential for more conflicts, especially in top-down implementation approach.

If we simply weigh the factors even without the points, both sides seem relevant and there is work that needs to be done to address the issues and take opportunity of driving forces.— because this is an activity to work towards a ‘desired outcome’, the decision-making team will go back to the drawing board and reevaluate the weaknesses and how to address them: In this case a *robust implementation and transition strategy is required- so it will be formulated with consultation from local municipalities, NGO’s, and industry specialists*. Driving forces already

exist: political and institutional support exists in the form of provincial vision and updated plans that encourage the proposal. Resources for implementation exist—*they need to be mobilized. Funding only requires channeling.* There is support and approval from a majority of *stakeholders. They need to be brought to the table at major stages of the implementation process.*

We can finalize the analysis by considering the action strategy or a way forward highlighted in italics above; that was formulated by evaluating the most pressing factors.

7.0 Conclusion

Through highlighting the variability in designations and promotion of non-agriculture uses either through official policy or non-standardized land classification process, the research has built a case for a regional *agricultural system*. In order to bypass the procedural time delays in implementation of policy, it is suggested that policy reform process should be based on a comprehensive model that is based on the ground-proofing exercises and local governments should be directed to implement and integrate the plan without waiting for reviews. Quick results mean quick action for reform. Because policy can never address all issues that emerge with time.

More research is required on the topic in order to better understand the linkages, formulate solutions and to be able to mitigate the impacts while reversing the effects of non-agricultural uses. This can be done through empirical studies that would reflect on the degree of change the impacts are causing. More research is also required on developing a robust policy implementation framework especially with feedback and consultation from the local government bodies.

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Tables

Table 1.0 Comparison of Rural and Agricultural Designation of Case Study areas		
Area	Designations	Zoning By-Law
Pickering	Agriculture Areas, Countryside Areas, Oak Ridges Moraine Countryside Areas	Rural Agricultural Zone (A), Village Zone (V) Greenbelt, Conservation Zone (G)
East Gwillimbury	Protected Countryside, Rural, Prime Agricultural and Holland Marsh Specialty Crop Area	Rural (RU), Oak Ridges Moraine Countryside (ORMCS)
Caledon	Rural Area, Rural Lands, Prime Agricultural Area, General Agriculture, Rural Industrial, Countryside Area, Greenbelt Plan Protected Countryside	Agricultural (A1), Rural (A2), Small Agricultural Holdings (A3), Agricultural – Oak Ridges Moraine (A1- ORM), Rural – Oak Ridges Moraine (A2-ORM), Small Agricultural Holdings – Oak Ridges Moraine (A3-ORM)
Wellesley	Prime Agricultural Area, Rural Area,	General Agriculture (A1), Small Lot Agricultural (A2),

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	Protected Countryside	Agricultural Institutional (AIN), Rural Mixed Use/ Agricultural Cluster (MAC)
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Table 2.0 Evaluating Official Documents: Policy Comparison				
	Region of Durham (East)	York Region (Central-East)	Peel Region (Central-West)	Waterloo Region (West)
Prime Agriculture Lands/Area defined and Mentioned in Official Plan?	Pickering	East Gwillimbury	Caledon	Wellesley
	Not Defined, Mentioned Yes	Mentioned (YES) Defined (NO)	Yes	Yes
Prime Agriculture Areas Identified in Maps/Schedules?	Yes	Yes	Yes	Yes
Policy exists that permits non-agriculture activity in Agriculture Areas?	Yes	Yes	Yes	Yes
Agriculture and Rural Definitions are consistent with the PPS?	Yes	Yes	Yes	Yes
Zoning Bylaws are present that restrict the outfall of non-agriculture use?	Not comprehensive.	Yes, But not comprehensive.	Yes, comprehensively	Yes. Require comprehensive update.
Policy exists that mitigate the impact of the non-agriculture uses?	Yes	No, Separate policy exists, only points to Greenbelt Plan and Protected Countryside policies.	Yes	Yes
List of non-agriculture related uses listed and organized?	No	No	No	No

Table 3.0 Permitted non- agricultural uses in GGH on agricultural land

Permitted non-agricultural uses/activities	Impact of non-agricultural Uses
<ul style="list-style-type: none"> • Agricultural research by colleges and universities. • Small-scale structures for recreational uses (such as boardwalks, footbridges, fences docks and picnic facilities.) • Hobby Farms. • Dry-industrial use • Aggregate Extraction. • Secondary Uses related to agriculture • Minor Expansion of existing facilities. • Forest, fish, and wildlife management, conservation, infrastructure use. • Environmental Management and Forest Management related uses. • Recreational uses • Theater and Musical Concerts (temporary) • Natural Heritage features and associated setbacks • Small-scale crafts industries • Non-farm residential lots. 	<ul style="list-style-type: none"> • Noise from special and seasonal events on or near agriculture areas • Urban/non-local traffic leading to delays in farming operations and increased delivery times. • Reduction in continuous land holdings. • Illegal dumping of waste. • Social Conflicts • Legal Conflicts • Farm support services dislocated • Loss of topsoil • Farm lot size regulations, restricting certain types of farming. • Conflicts associated with water sourcing • Loss in economies of scale • Livestock facilities may not be able to expand—thus limiting the productive output.

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<ul style="list-style-type: none">• Accessory Agricultural Residential,• Institutional (Supporting historically significant communities eg: Religious sites and Cemeteries)• Equestrian Business uses such as stable and riding academies• Animal hospital and veterinary establishments	
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Table 4.0 Force Field Analysis for Implementing a Comprehensive Agriculture System		
Driving Forces (Catalyst for Change)	Desired Outcome (Change Proposal)	Restraining Forces (Obstacles to Change) (Forces against Change)
<ul style="list-style-type: none"> • Research and theory confirm the need for the change. • Resources and funding can be channeled for the proposal. • Provincial vision and plans support and encourage the change in the proposal— Political and institutional support exist • Support and approval from majority of <i>stakeholders</i> 	<p style="text-align: center;"><i>Implement a Comprehensive Agriculture System that promotes Consistency in Agriculture Land base and Introduces universal Land use designations</i></p>	<ul style="list-style-type: none"> • Costly to conform and implement • Protection policy evolving with time • No clear implementation strategy by authorities • The results will take time • Many areas still using old mapping system (updating them will be-be a complex process) • Stakeholders and municipalities not directly consulted • The framework is still on paper and in draft stages—It will take more time to get formulated into final policy.

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<ul style="list-style-type: none">• Lack of uniform Agricultural designation.• Inconsistent land mapping and studies.• Current Protection tools like MDS gives way to new issues.• Lot fragmentation• Current policies do not have a formalized systems-based approach.• Non-agricultural use policy is permissive.• Agri-food network is not integrated and not formalized.		<ul style="list-style-type: none">• More studies need to be done.
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