AN ANALYSIS OF THE CRITICAL SUCCESS FACTORS FOR PARTICIPATION IN

AGRICULTURAL-ENVIRONMENTAL PROGRAMS: A CASE STUDY

A Thesis

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ABSTRACT

AN ANALYSIS OF THE CRITICAL SUCCESS FACTORS FOR PARTICIPATION IN

AGRICULTURAL-ENVIRONMENTAL PROGRAMS: A CASE STUDY

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This research identifies the critical success factors for a 'Payments for Ecological Goods and Services' (PEGS) approach for conservation programs from farmlands, and insight into the decision-making in choosing whether to participate in a PEGS approach. My research draws on experiences incurred during a pilot phase of Alternative Land Use Services, a mechanism to deliver Environmental Goods and Services in Norfolk County, Ontario. My proposition was that trust and social capital are critical success factors in eliciting participation in PEGS programs from farmlands in Ontario. The critical success factors that emerged from my research included social capital and trust, as well as: participatory processes, community capacity, program simplicity, confidentiality, and communication and expectations management. I also tested a conceptual framework that focused on a farmer's decision-making process in choosing whether to participate in a PEGS program. I found that social and community characteristics had a significant influence on procuring participation.

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Chapter 1 – Introduction

1.1 Background

The agricultural agenda in Canada has begun to recognize that agricultural lands produce more than just commodity outputs; they also produce what are described as ecological goods and services (EG&S). In line with this recognition, federal and provincial ministers of agriculture in Canada (News Release, 2005**)** have pledged their commitment to "the continued development of an ecological goods and services (EG&S) policy… and support of research pilots that meet established criteria for policy development."

There have been approaches, programs and pilot projects in Canada that have addressed this gap in policy commitment and application. My research took the form of a case study, focusing on one such pilot project. The Alternative Land Use Services (ALUS) pilot project is an approach to the delivery of EG&S from farmlands in Norfolk County, Ontario. ALUS is an incentive-based program, designed in response to growing concern about the environment. This approach emphasizes a 'by-farmers, for-farmers' collaborative mechanism, local solutions and voluntary participation.

The ALUS concept is being tested in Norfolk County, located in South-Western Ontario. Figure 1.1 situates Norfolk County on a map of Ontario. Norfolk County was selected as the site for the ALUS pilot project for its diverse physiographic region and natural features, and because vast amounts of information already existed on its resources as its soils are particularly vulnerable to erosion.(Bailey and Reid, 2004). Participation by Norfolk County landowners in the ALUS program is voluntary. As of June 2010, 94

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farms are engaged in the ALUS pilot project, out of a total of 1651 farms in Norfolk County (Census Canada, 2001).

My research identified the critical success factors for the implementation and delivery of a Payments for Ecological Goods and Services (PEGS) approach for conservation programs from farmlands, with a particular focus on the Norfolk County ALUS experience. There are many approaches to the provision of ecological goods and services. Fox (2008, page 119) defines two broad categories of the provision of EG&S as taxpayer-financed government programs and beneficiary-financed market programs. The ALUS pilot program has characteristics that could be classified within either of these approaches; but for the purposes of this thesis, the ALUS approach is considered a PEGS program because the features of the ALUS program are paying landowners, who enter into voluntary contracts, on a yearly per/acre basis, for the provision of EG&S from their farmlands.

My research focused on the critical success factors for the design and implementation of a PEGS program, and on achieving landowner participation in these programs. I drew heavily from theories about trust and social capital in carrying out this research. Lewis and Chamlee-Wright (2008) define social capital as "informal social networks of relations; and the beliefs and norms to which these relations arise and define the character of networks." These authors view social capital as a resource, which, when drawn upon, can enhance individual's and group's means and possibilities. Ikeda (2008) writes that social capital can be comprised of norms of generalized reciprocity, networks of trust, the emergence over time, the operation in the public spaces of a community and

helps to promote entrepreneurial activity. Ikeda views social capital as a value-adding

feature of relations in a community which helps in maintaining trust in a community.

Figure 1.1: Map of Norfolk County (County #30), on a County Map of Ontario
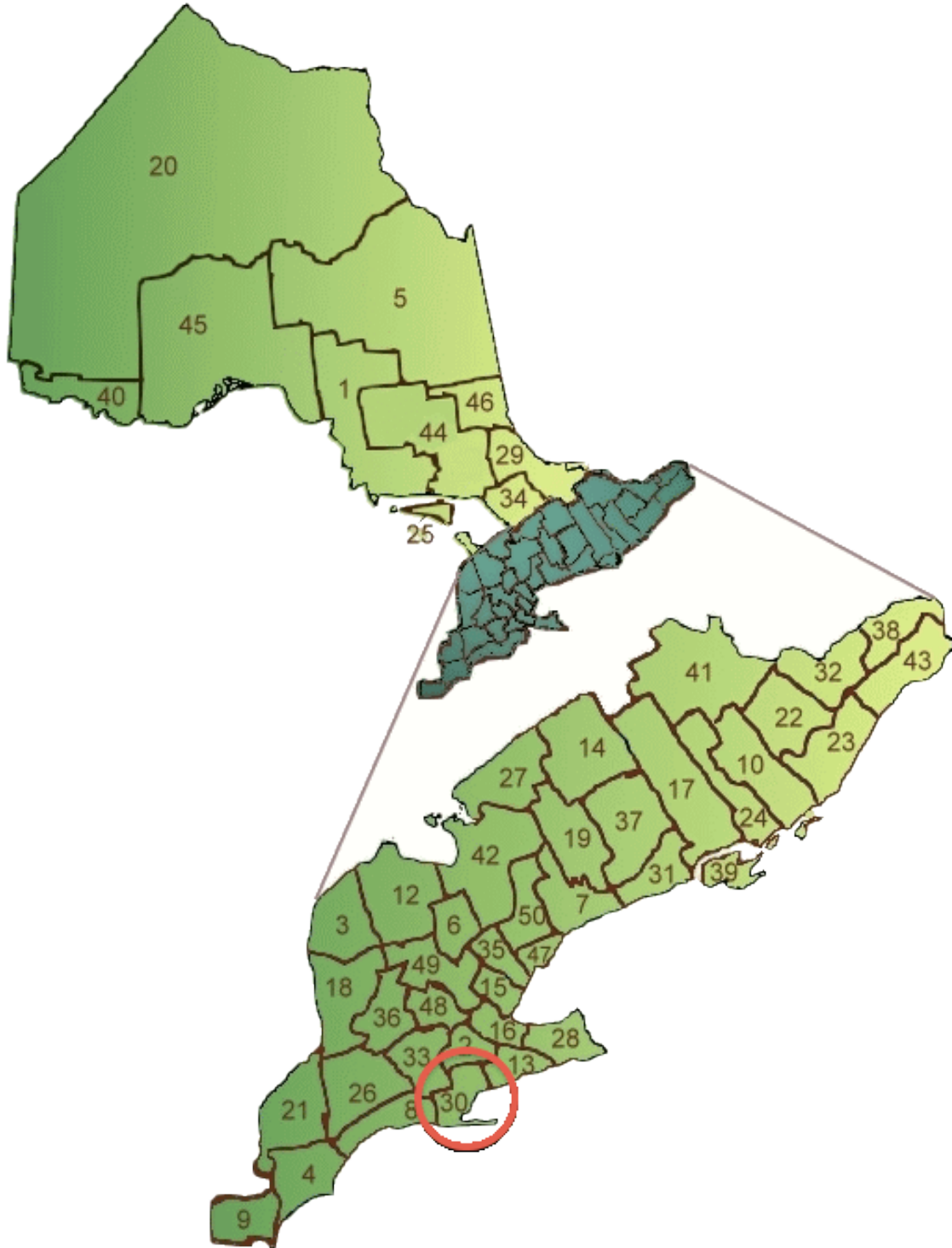
Legend: Norfolk County is number 30, circled.
Source: Ontario CSA Directory

1.1.1 Economic and Sociological Problem

The critical success factors arising from the experiences in the ALUS pilot project in Norfolk County, Ontario, are an important source of information for the design and implementation of PEGS approaches in Ontario. The success and eventual policy extension to a provincial and national level is one of the objectives for the ALUS pilot project administrators. There are many groups and individuals that might be interested in the information generated from this thesis, including: ALUS program organizers and associated committee members, Ontario ALUS alliance members, Delta Waterfowl, the relevant civil servants working for the ministries of Agriculture and Agri-Food Canada, Environment Canada, Ministry of Environment of Ontario, and the Ontario Ministry of Agriculture, Food and Rural Affairs, and other groups or individuals who are planning, or have started implementing, other PEGS programs.

1.1.2 Economic and Sociological Research Problems

There are two aspects that are not known, which my thesis will address. We do not fully understand a) the factors that contribute to participation decisions by farmers, and b) the general characteristics that contribute to success (or, critical success factors) of the design and implementation of a PEGS program. These unknowns can result in adversely affecting program participation, and influence the quantity and quality of EG&S provided by farmland. By addressing these knowledge gaps, I hope to contribute to a clearer understanding of the factors that can promote successful implementation, delivery, and operation of PEGS programs in Ontario and beyond, with specific application to the ALUS pilot project. The proposition that I was testing was whether

trust and social capital are critical success factors in the provision of EG&S from farmlands in Ontario.

This thesis belongs to two classes of disciplinary research problems; it is both an ex-post and ex-ante program evaluation. It is ex-post because the pilot project in Norfolk County is already underway; it is ex-ante because the research has direct implications for the replication of the project in other locations and at a larger scale.

This thesis research sought to integrate the concepts of trust and social capital across disciplines. Economic and sociological theory can highlight potential issues and characteristics that are paramount in the successful delivery of environmental services. The research generated by this thesis can contribute to policies and informed decision-making for those involved in current and future PEGS and ALUS programs. If the critical factors for success are identified, individuals can make use of this information in their project strategy and implementation. I acknowledge that these individuals have differing information needs, as they are making different types of decisions; by articulating these needs and goals in a singular framework, I am hoping to contribute a comprehensive and useful framework for the various stakeholders involved in PEGS programming.

The scope of the research was bounded by a number of limiting components. The place-based research occurred in Norfolk County (Ontario, Canada). Moreover, the ALUS program, with its voluntary participatory nature, provided a social experiment with which to compare outcomes of participation and non-participation; the participants also limit the spatial scope of the study, as only Norfolk County farmers are eligible for participation in the pilot. The temporal aspect was confined to the beginnings of the experience of those involved in the pilot project from 2002 up until the present time.

Finally, while there was a focus on the experiences in the ALUS pilot project, results and recommendations could still apply to PEGS programming within an Ontarian context.

1.2 Purpose and Objectives

1.2.1 Purpose

The first purpose of this thesis was to identify the factors that contribute to farmers' participation decisions in PEGS programs. The second purpose was to identify critical success factors for the design, promotion and implementation of PEGS programs, that which emerged from a number of methods and sources, including the ALUS pilot project in Norfolk County, Ontario. It was through this investigation and identification process that the lessons learned from the pilot project were assessed and utilized in the broader implementation of PEGS programs. The third purpose was to integrate theories and concepts about trust and social capital from the disciplines of economics and sociology, in the analysis of the success factors.

1.2.2 Objectives

There were three objectives in my thesis. Each of these represents a stage in building a framework through which my research can be articulated. Each objective is related to at least one chapter in my thesis. These linkages are summarized in Table 1.1.

Objective 1: To integrate the literature on trust and social capital from economic and sociological points of view.

The rationale for undertaking this activity is that it directly responded to my second purpose: the incorporation of theories and ideas of trust and social capital from both economics and sociology. By evaluating the extent to which there is a bridge of ideas between disciplines, as well as appreciate the theoretical insights from both areas, I was

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able to situate my research problem within an informed position about the topic. I

explicitly examined the variables that researchers attribute as contributing to building of

trust and social capital. This objective was achieved in Chapter 3 - Social Capital and

Trust: A Synthesis of the Literature in Sociology and Economics

Objective 2: To develop two models; first of the factors considered in farmers'
participation decisions in PEGS programs; and second, of the critical success factors for
PEGS programs, and for the ALUS project by incorporating concepts of social capital
and trust into an integrated design

The reasoning for the development of these conceptual frameworks was that they

provided a structure within which my empirical evidence was discerned and assessed. I

built these conceptual frameworks by incorporating the ideas about the factors that

contribute to trust and social capital that I had identified in the literature review into an

integrated design. It is within these frameworks that I built theories about factors that

influence participation in PEGS programs, and the critical success factors the design and

implementation of PEGS programs. These conceptual framework then informed a model

of the critical success factors of the ALUS program, which I tested in Norfolk County.

This objective is linked to both my first and second purposes, and it was addressed in

Chapter 4 - Conceptual Framework: A Participation Model for a Payment for Ecological

Goods and Services Program

Objective 3: To test my models of the factors considered in farmers' participation
decisions in PEGS programs, and of the critical success factors of PEGS programs
though the use of empirical evidence from the research, in order to recognize the
essential components for future success in project expansion.

This objective sought to test the conceptual model through the use of three

methods, focus group analysis, in-depth interviews, and content analysis, with a

particular focus on the ALUS pilot project in Norfolk County. I created and tested a

decision-making model for participation in PEGS program, and I identified the critical

success factors for the design and implementation of a PEGS program. This objective is

linked to my first and second purposes, and it was achieved in Chapters 6, 7 and 8, as

Table 1.1 demonstrates.

Table 1.1: Connection of Objectives to Thesis Chapters

Objective	Related Chapter
Objective 1: To integrate the literature on trust and social capital from economic and sociological points of view.	**Chapter 3**: Social Capital and Trust: A Synthesis of the Literature in Sociology and Economics
Objective 2: To develop two models; first of the factors considered in farmers' participation decisions in PEGS programs; and second, of the critical success factors for PEGS programs, and for the ALUS project by incorporating concepts of social capital and trust into an integrated design.	**Chapter 4**: Conceptual Framework: A Participation Model for a Payment
Objective 3: To test my model of the critical success factors of PEGS programs though the use of empirical evidence from the research, in order to recognize the essential components for future success in project expansion.	**Chapter 6:** Focus Group Write up and Analysis **Chapter 7:** Interview Write up and Analysis **Chapter 8:** Results and Discussion

1.3 Chapter Outlines

Chapter 2 – Alternative Land Use Services: A Background

This chapter describes the history of ALUS, its guiding and operating principles, how ALUS is being used in practice in Ontario, and the future aspirations for the ALUS approach according to ALUS organizers in Norfolk County. The chapter was co-written with my colleague, Paul Guerra.

Chapter 3 - Social Capital and Trust: A Synthesis of the Literature in Sociology and Economics

This chapter describes and synthesizes literature from sociology and economics with respect to the themes of social capital and trust. Economic and sociological theories of trust and social capital were thought to highlight potential issues and characteristics that are paramount in the successful delivery of environmental goods and services. The literature review was key in informing my conceptual framework, and directing my thinking about my research problem and proposition.

Chapter 4 - Conceptual Framework: A Participation Model for a Payment for Ecological Goods and Services Program

This chapter presents my original conceptual framework, which I tested throughout this thesis research. The framework is an individual's participation process in the ALUS program. It was created after conducting the literature review, but before commencing data collection. It contains the factors that might encourage and discourage participation in a Payments for Ecological Goods and Services (PEGS) program identified in the literature, and contextualizes the way in which trust can be considered a critical success factor for achieving participation in a PEGS approach.

Chapter 5 – Research Strategy and Methods

This chapter outlines the strategy that guided my research approach. The research strategy deemed most appropriate to address my research questions includes the case study approach, as well as the use of specific methods such as face-to-face interviews, focus group interviews, and content analysis. Strategies for ensuring rigour were also explained, as well as the way in which I determined critical success factors for the design and implementation of Payment for Ecological Goods and Services Programs (PEGS) in Ontario.

Chapter 6 – Focus Group Results: ALUS Farmer Participants and Non-Participants

This chapter is an analysis of the data that came out of the two focus groups that were held in Norfolk County in December, 2009. The first group was composed of 11 Norfolk County farmers who were current participants of the ALUS pilot project, and the second group was made up of 11 Norfolk County farmers who were not participating in ALUS. This chapter's objective is to compare and contrast the perceptions of these two groups in an effort to understand decision-making processes of participating in ALUS. The chapter is organized around three broad themes: motivations for participation, access to information, and participation decision variables.

Chapter 7 – Interview Results: Interviews with Policy and Program Administrators

Throughout my research, I held interviews with ALUS organizers, Conservation Authority Representatives, government officials, EG&S researchers, and farm organization leaders. This chapter is organized into observations about factors in delivering ecosystem service programming. This section summarizes the most commonly discussed elements of agricultural-environmental programs exposed by my interview

participants, in terms of the ALUS pilot's implementation and delivery. The themes discussed in these interviews included: 1- The Sense of Ownership of EG&S projects; 2- Importance of Confidentiality; 3- Program Guidelines; 4- Program Simplicity; 5- Word of Mouth and Program Uptake; 6- Farmer-to-Farmer First Contact; 7- Social Capital; 8- Participatory Processes; 9- Farmer-Led, Farmer-Driven; 10- Program Longevity, Reputation and Trust; 11- One-on-One Assistance; 12- Managing Participants' Expectations; and 13- Capacity.

Chapter 8 – Results and Discussion

I used three methods in this thesis research: focus groups, in-depth interviews, and content analysis, all of which were informed by the literature review. This chapter brings together the concepts from these three methods, resulting in a list of critical success factors for the design and implementation of PEGS program in Ontario, with a specific focus on the experiences of the ALUS program in Norfolk County.

I discuss the ideas that emerged from all of three of the methods I used, using methodological triangulation, which is the comparison of many (three or more) methods to examine convergences and overlaps within the data in each of these methods. I used triangulation to guide what have emerged as the congruous points shared among these methods. I called these variables the critical success factors of designing and implementing a Payments for Ecological Goods and Services (PEGS) program, with particular focus on the ALUS pilot project in Norfolk County.

The following six critical success factors that contribute to successful design, promotion and implementation of the ALUS program, emerged: 1- Social Capital and Trust; 2- Participatory Processes; 3- Community Capacity; 4- Program Simplicity; 5-

Confidentiality; and 6- Communication and Managing Expectations. The first part of

Chapter 8 presents and explains these critical success factors with a broader PEGS

perspective. The second part focuses specifically on the ALUS pilot in Norfolk County,

Ontario.

Chapter 2 – Alternative Land Use Services

A Background
[Co-written with Paul Guerra]

2.1 Introduction

Farmers have the potential to supply environmental goods and services (EG&S), but as Ribaudo et al. (2008) report, they are typically undersupplied in markets. The recognition of the importance of the provision of EG&S from private farmland has led to the design of policy mechanisms that aim to secure this provision. A number of policy options are available including: regulation, annual payments, one-time payments, tradable permits, tax incentives, and environmental certification/branding.

The Alternative Land Use Services (ALUS) model is a concept that is designed and delivered by farmers, that makes annual payments for the provision of environmental goods and services from private farmland. This chapter will describe in detail the history of ALUS, its guiding and operating principles, how ALUS is being used in practice in Ontario, and the future aspirations for the ALUS approach according to ALUS organizers in Norfolk County.

2.2 History

A brief history of the ALUS concept, with a focus on the Norfolk County ALUS pilot project, is presented in this section. This section includes the origins of the ALUS concept's development, the commitment from government to investigate programs that provide EG&S, the development of pilot projects across Canada, and documented reactions to the ALUS approach in Ontario.

2.2.1 Origins

News releases from Keystone Agricultural Producers and Delta Waterfowl provide information beginning in 2004. According to Delta Waterfowl (2004), Ian Wishart, of Keystone Agricultural Producers, was the principal designer and promoter of the ALUS approach. Mr. Wishart is credited by Delta Waterfowl with building support for ALUS among farm organizations, farmers, conservation groups and government officials. Keystone Agricultural Producers found a partner in the promotion of ALUS in the Delta Waterfowl organization, a noted North American conservation group.

According to Dave Reid (Personal communication, October 9, 2009), in 2004, Ian Wishart presented the ALUS approach to a meeting of the Federal and Provincial Ministers of Agriculture in Cardigan, Prince Edward Island. At the conclusion of this presentation three appeals were made for supporting ecological goods and services policy in Canada. These appeals were: (1) that a federal/provincial working group be struck to work towards development of a policy on ecological goods and services; (2) that a national/international symposium on ecological goods and services be hosted to inform government and politicians about ecological goods and services policy and programming from around the world and; (3) that a fund be established to finance pilots for input to the development of a policy on ecological goods and services. According to Mr. Reid, all three of these appeals were granted.

In the time leading up to the 2005 meeting of Federal and Provincial Ministers of Agriculture, in Kananaskis, Alberta, farm groups, including the Canadian Federation of Agriculture, urged the ministers to adopt the ALUS approach as a National Stewardship

Strategy (Delta Waterfowl, 2005a). At the meetings the ministers approved a policy agenda that included the testing of ALUS (Delta Waterfowl, 2005b).

In April 2007, a report conducted by Tyrchniewicz Consulting and funded by Delta Waterfowl stated that the benefits of a national ALUS program in Canada outweighed the costs. This was an important milestone because it was the first such estimate released to the public. Delta Waterfowl (2007) hoped that the release of this work would encourage further discussion of ALUS at a national level.

2.2.2 Pilot Project in Manitoba

In November 2005, following the meeting in Kananaskis, Manitoba announced the launch of a three-year pilot project of the ALUS approach. A news release from Delta Waterfowl (2005c) stated that funding for the pilot project came from the environmental pillar of the Federal Agricultural Policy Framework, the Rural Municipality of Blanshard (where the pilot project was conducted), as well as from agencies in Mississippi and Tennessee. The pilot project's budget over the three years was expected to be $1.8 million. This pilot project has since concluded and an analysis of the project is expected in the future.

2.2.3 Pilot Project in Ontario

David Reid (Personal communication, March 4, 2009), of the Norfolk Land Stewardship Council, said that the first discussion of the ALUS approach in Ontario occurred after he read an article (written by Robert Sopuck of Delta Waterfowl) about ALUS in the Ontario Farmer newspaper in Fall 2001. Mr. Reid (Personal communication, October 6, 2009) reports that, "as a result and because of a coincidental contact with Bob Bailey, I was able to arrange an ALUS presentation by Bob [Bailey]

and Ian [Wishart] at an Ontario Stewardship zone meeting that I hosted here in Simcoe and that had an agricultural theme." Mr. Reid reports that a number of farmers who were also members of the Norfolk Land Stewardship Council attended this meeting and were impressed enough by the ALUS concept to encourage the Norfolk Land Stewardship Council to pursue hosting a pilot project. Representatives from the Norfolk Land Stewardship Council approached the Norfolk Federation of Agriculture to ask for the support of the Norfolk Federation of Agriculture in leading the pilot project. According to Mr. Reid, the Norfolk Federation of Agriculture agreed to lead the pilot project in March of 2002. According to Bailey and Greenslade (2006), the first ALUS workshop in Norfolk County, Ontario occurred in 2003.

Bailey and Greenslade (2006) reported that, as of 2005, the Norfolk Country project had not yet launched. Gorsuch (2009) reports that as of April 2007, $250,000 had been spent in Norfolk County over the previous 5 years on pilot proposal development. Activities in this development stage included: the aforementioned workshop in 2003, publication of the pilot proposal in January 2004, establishment of a 9 member participatory advisory committee to direct the pilot, completion of a benchmark survey on public opinion related to farming and the environment in Norfolk Country, the publication of an ALUS brochure and the establishment of four ALUS demonstration farms. The ALUS pilot project was officially launched in Norfolk County on September 20, 2007.

The intent of the organizers of the Norfolk County ALUS pilot project was to secure enough funding to offer the ALUS program to all farmers in Norfolk County. At the time of the pilot project launch, the funding did not meet their expectations, and the

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project had to be scaled back. According to Norfolk ALUS coordinator Kristen

Thompson (Personal communication, June 4, 2009), instead of a 9-year pilot project, the

was scaled back to 3 years. As well, instead of offering the project county wide, ALUS

organizers decided to focus on the development of the pilot project in Norfolk County, by

setting up additional demonstration farms. This was hoped to display the ways in which

ALUS could benefit farms of any types and sizes, as well as to target specific watersheds

for riparian buffer creation. Due to an influx of funding in the last two years of the pilot

project, its end date was extended from 2010 to 2012. New enrolments are being sought

up to the end of the 2010 field season, at which point the pilot will continue to pay annual

incentives to all enrolled participants until 2012.

2.2.4 PEI ALUS

Dave Reid (Personal communication, October 9, 2009) reported that the PEI

Minister and Deputy Minister of Agriculture attended and participated in an ALUS

workshop held in Norfolk County, Ontario in March 2003. In 2007, discussions began in

Prince Edward Island (PEI) about how to bring the ALUS concept there. PEI began

testing a modified approach to the ALUS concept in two watersheds and quickly moved

beyond the pilot stage to adopting ALUS as provincial policy in 2008. The program is

administered through the PEI Department of Environment, Energy and Forestry. Hager

(2009) reports that the PEI Department of Environment, Energy and Forestry typically

relied on a heavily regulated approach to agri-environmental issues, but saw the ALUS

concept as way to encourage farmers to make decisions that benefit themselves as well as

the environment. ALUS in PEI had an initial budget of $750,000 for the 2008-2009 year

and Delta Waterfowl (2009) reported that it annual funding increased to $1 million for the 2009-2010 funding year.

2.2.5 Policy Discussion

Policy discussions on the ALUS approach continue to the present. A Standing Committee on Agriculture and Agri-food (2007) report made two important recommendations that relate to environmental stewardship programs. First, they stated that farmers deserve to be compensated for generating EG&S, and that their place as environmental stewards should be recognized. They also noted that other countries are pursuing policies and programs that are similar to the ALUS approach, and they suggested that Canada follow suit.

The debate over the suitability of adopting the ALUS model as public policy in Ontario recently became apparent with a written debate between proponents and detractors in the farm community weekly paper, the Ontario Farmer. The Ontario Farmer from April 21st, 2009 contained a letter to the editor by Elizabeth Brubaker, the executive director of environmental NGO Environmental Probe, who wrote that the ALUS model failed to distinguish between the provision of environmental goods and services and the prevention of environmental harm. In her view only the former is acceptable. The following two Ontario Farmer issues, from April 28th and May 5th, contained letters to the editor defending the ALUS approach from a variety of sources including farmers, a farm organizations employee, employees from two separate environmental NGOs and a Masters Candidate from York University.

2.3 ALUS Principles

The ALUS approach is modelled on 11 key principles. These are outlined and detailed below, adapted from "The Key Principles of ALUS." (Dave Reid, Personal Communication, May 27 2009.)

1. ALUS believes that the stewardship of the environmental resources ought to be a cost-shared endeavour, as many EG&S that benefit the public are found on private lands. The delivery and maintenance of EG&S by participating landowners are incentivized with annual payments to reflect opportunity costs of converted land, on a per-acreage and yearly basis.

2. EG&S are understood to be a marketable service, and so its delivery is assigned a monetary value. The organization in Norfolk County currently uses land rental rates on which the EG&S are provided.

3. ALUS considers both payments for landscape improvement, as well as the maintenance of existing natural assets. There is also a scale-back policy for those farmers that have already maintained natural assets.

4. ALUS aims to produce measurable EG&S. They believe these to be associated with socio-economic and ecological benefits for all Canadians.

5. ALUS endeavours to be a grassroots program. They believe that investment in the capacity of citizens and rural communities is essential to conservation programming. They implement the program with flexible decision-making at the community level.

6. ALUS believes farmers and ranchers are in the ideal position to deliver EG&S from their lands. ALUS allows for their environmental agenda to be managed by these farmers, in cooperation with their communities, farm organizations, governments, non-government agencies, and the Canadian public.

7. ALUS is independently monitored and audited. Third party evaluation is an important component to the ALUS process.

8. ALUS development and delivery aspires to be transparent and accountable. Community leadership will be committed to planning, delivery, and reporting.

9. A key component of ALUS is that they will meet Canada's international trade obligations.

10. ALUS will complement the policies of the Agricultural Policy Framework, the Environmental Farm Plan, and other policies surrounding natural capital and environmental resource conservation that are currently in place. Their program also respects the local agricultural and environmental initiatives that exist already.

11. ALUS uses a "fee-for service" concept to provide environmental benefits. ALUS is designed to provide these benefits at a fair market value, and does not hand out environmental subsidies.

ALUS also functions according to 6 Operating Principles. These are summarized in Table 2.1.

Table 2.1: A Summary of Alternative Land Use Services (ALUS) Operating Principles

Operating Principle	Summarized Explanation
1. Voluntary	Participation is a choice
2. Capping	Up to 20% of a farmer's land can be signed up to be part of the fee-for-service concept
3. Integrated	Aims to be integrated with the Environmental Farm Plan and other existing programs
4. Flexible	Three year term Opt-out possibilities
5. Targeted	Environmentally sensitive lands targeted for stewardship
6. Accountable	Managed and controlled by farm and rural communities Independently monitored and audited Transparent and open to public scrutiny

Source: Bailey, Robert O. and David J. Reid. (2004). "ALUS: The Farmer's Conservation Plan" ALUS Pilot Project Proposal for Norfolk County, Ontario.

2.4 ALUS in Practice

This section describes aspects of the ALUS pilot project design as they used in practice in the Norfolk County pilot project. Components of the Norfolk ALUS pilot project's design described here include: administrative structure, funding sources, delivery mechanism, participant selection, incentive mechanism, and monitoring and verification. Noted too are the changes in how ALUS is applied in practice in Norfolk County over time.

2.4.1 ALUS Administrative Structure

The role of the Project Coordinator is a key part of the functioning of the Norfolk ALUS project. Kristen Thompson currently fills this position. Ms. Thompson acts as an intermediary between the farmers and the ALUS organizers, throughout their process of adopting the ALUS approach. For a given farmer, the adoption process begins with a statement of interest, and continues through with the approval of request, farm visits and evaluation, planting and land-managing. The project coordinator has iterative meetings with the farmers throughout the course of these events, providing one-on-one assistance to the farmers as required.

The ALUS pilot project in Norfolk County is overseen by the Partnership Advisory Committee (PAC), acting as an executive board for the decision-making processes. The PAC is a sub-committee of the Norfolk Federation of Agriculture. The PAC meets bi-monthly, and is responsible for the administration, decision-making and management of the daily affairs of the project (Norfolk ALUS website, 2009). This committee is made up of farmers from the Norfolk farming community, as well as other stakeholders including members from the Norfolk Federation of Agriculture, Delta

Waterfowl, Ministry of Natural Resources, OMAFRA, the Norfolk Land Stewardship Council, Norfolk County, the Norfolk Soil and Crop Improvement Association, the Long Point Region Conservation Authority and the project coordinator. According to Dave Reid (personal communication, October 9, 2009), there have been up to sixteen members of the PAC and of that sixteen, eight are farmers.

2.4.2 ALUS Funding

Originally, the objective of the Norfolk ALUS pilot project was to showcase the benefits of the ALUS approach so that it would be adopted as provincial policy backed by taxpayer funding. According to Bryan Gilvesy (Personal communication, January 27, 2010), ALUS was envisioned as a single-payer system, with funding coming from the government. This is no longer the focus of the ALUS project. Dave Reid (personal communication, October 10, 2009) stated that, due to current economic downturn, this is an inopportune time to be implementing a new and costly program province-wide.

Bryan Gilvesy (Personal communication, September 16, 2009), reported that, "carbon has changed everything in our funding model". He was speaking in reference to ALUS participating in carbon-offset markets that are developing to reduce the concentration of the greenhouse gasses in the atmosphere. Mr. Gilvesy reported that ALUS does not want to participate in traditional carbon exchanges. He believed that ALUS can provide carbon offsets that will be traded with those who demand them, and as such, ALUS can control its brand and its product.

ALUS is now proposing that funding for on-going program operations could be obtained through the sale of a marketable bundle of ecological goods and services. These were originally called the Ontario Conservation Credit, and are now referred to as the

Ontario Ecological Credit (ecocredits). The idea behind these credits is that those who demand ecological goods and services can buy the equivalent of an acre of a specific ALUS land-use enhancement, which contains multifunctional ecological benefits associated with that acre of land, as well as a verified and quantified carbon offset attached. As of writing, this proposed concept is still in the policy debate stage in the ALUS Participatory Advisory Committee, and therefore no formal guidelines on pricing and implementation are available at this time.

2.4.3 Delivery Mechanism

Some of the tools that the ALUS team uses to engage public support include: demonstration farms, available for viewing upon request; farm tours to promote the impact of ALUS on the ground; speaking at various conferences and workshops (both academic and political) to promote the ALUS approach. They specifically market to the farming community in Norfolk County through word of mouth, ALUS workshops and targeting lands of specific ecological interests, with farmer liaisons making the first contact. When a farmer decides that he or she would be interested in participating in the ALUS pilot project, the participation process is as follows (according to Kristen Thompson, (Personal communication, June 4th, 2009): first, they fill in a one-page Expression of Interest form. Then, their application goes to the approval committee, made up of members of the PAC and ALUS organizers. The committee ensures that all requirements are met, including having a registered farm number, and his or her proposed enrolment not exceeding 20% of their cultivated land. The coordinator then does a site visit to listen to the farmers' ideas about on-farm EG&S projects, and together they draft a plan for each farm.

2.4.4 Incentive Mechanism

There are two financial incentives for participation in the Norfolk ALUS pilot project. The first is that grants are given to implement all projects, so conversion costs are covered. ALUS pays for the materials and implementation of all of their activities and further pays landowners for their in-kind contributions (labour) to the projects. The second incentive is that landowners receive an annual payment, which recognize the opportunity costs of removing land for agricultural production. Landowners typically receive an annual payment of $150/acre/yr. ALUS organizers decided on this payment level based on an average annual rental rate of agricultural land in Norfolk County. Some ALUS projects receive a reduced annual incentive of $75/acre/yr if they use their project for livestock feeding late in the season.

2.4.5 Participant Selection

Selecting participants for enrolment in the Norfolk ALUS pilot project has so far been straightforward. Dave Reid (Personal communication, January 27, 2010) reported that landowners who submit Expressions of Interest in the program are selected on a first-come first-serve basis up to the point that maximum potential participation is reached. Mr. Reid reported that full capacity was not reached in the 2008, nor the 2009 field seasons. ALUS organizers have used both a targeted approach to participant selection, as well as hosting workshops and having interested community members come to them.

2.5.6 Monitoring and Verification

One of the key principles of the ALUS approach is that their activities will produce measurable environmental goods and services. To ensure that the Norfolk ALUS pilot project adheres to this principle, ALUS contracted Agricorp to carry out

third-party verification of the acreage enrolled in the ALUS pilot. At the April 7, 2010 meeting of the ALUS Participatory Advisory Committee, ALUS organizers recognized the importance of verification done by Agricorp, but expressed desire to undertake more extensive monitoring in the future that can lead to verified and quantified ecological benefits. At the time of writing, no formal procedures outside of the verification carried out by Agricorp have been adopted.

2.4.7 ALUS Uptake

According to Kristen Thompson (Personal communication, August 2009; Personal Communication, ALUS Newsletter May 2010) over the last three field seasons ALUS has 91 farm families participating on 105 farm properties. Some examples of the project that have been carried out in the Norfolk County pilot include: creation and expansion of wetland habitat; riparian buffer establishment; creation of Tallgrass Prairie and Oak Savannah; reforestation using native Carolinian species; pollinator hedgerows; and grassed windbreaks. (Kristen Thompson, Personal communication, August 2009). They have also targeted farms located on the South Creek watershed, and the Patterson Creek, encouraging the placement buffer strips to protect increased lengths of the creek and river.

2.5 Future Aspirations
2.5.1 Broad Objectives for ALUS

There are many aspirations for the future of the ALUS approach. While these tend to deviate slightly amongst the different stakeholders and organizers, the broad goals are listed below.

An overarching goal of ALUS is a visible greening of the landscape. This entails more conservation on the ground. Some ALUS organizers aspire to bring the EG&S provided through the ALUS approach to market. Bryan Gilvesy (Personal communication, September 16, 2009), chairman of the Norfolk ALUS Participatory Advisory Committee, spoke to this in commenting that "the future lies in the creation of green products". This includes entering markets for carbon offset credits as well as the creation of a bundled environmental goods and services offset credit. For others, like Steve Scheers (ALUS organizers, Personal communication, September 16, 2009), the goal of ALUS into the future would be to utilize the ALUS approach as a means to stabilize farm income while simultaneously protecting natural resources.

A desire among the ALUS organizers is that any expansion of the ALUS approach remains philosophically consistent with its application in the pilot project phase. Under this arrangement, the ALUS philosophies of being adaptive to local needs, being farmer driven and delivered locally remain central to the program.

An objective that was articulated in the formative stages of the ALUS pilot in Norfolk County, was to have an ALUS provincial program here in Ontario, and then a nation-wide program. For some, this goal persists. In the shorter term, some state the objective as enabling other counties around Ontario, who have expressed interest in having a pilot, to initiate these programs.

2.5.2 Objectives for the Pilot in Norfolk County

There are varied hopes for ALUS in Norfolk County at the conclusion of the three-year pilot. On the one hand, it is important to keep in mind the nature of a pilot: it is a short-term program that must wind down due to time and funding constraints as well as

the need to evaluate the pilot project. As Kristen Thompson wrote (Personal

communication, Sept 16), "I think when the pilot is rolled out, and it is completed, it will

really give us a good platform to show what we've done, and to report on the successes

that we've had." After the conclusion of the pilot, Ms. Thompson (project coordinator)

believes that much of the farmland enrolled in the ALUS pilot will remain in its

converted state. Steve Scheers (ALUS Organizer) also believes that the areas where

restoration has occurred through ALUS will remain. This belief stems from the notion

that since the farmers who participate in the ALUS approach collaborate and become

partners in the decision makings process, they then will take ownership for the changes

made on their lands. As well, since the conversion costs have been sunk, the farmer is

left with a decision between the co-benefits (whether they be economic, environmental or

purely aesthetic) and associated maintenance costs of leaving the land in its converted

state against the costs of converting the land back to agricultural production and the

opportunity cost of not growing agricultural crops.

2.6 Summary

This chapter provided an overview of the history of ALUS, how it presently being

applied in Norfolk County Ontario, and what future aspirations the Norfolk County

ALUS organizers have for the ALUS approach. The history of the ALUS model as it has

been used in Manitoba and PEI and the development of the Norfolk County, Ontario pilot

project were provided. This chapter stated the key and operating principles adhered to in

the application of the ALUS model in Norfolk County. The aspects of the design of the

implementation of the ALUS approach in Ontario are described.   Finally, the future

aspirations for the ALUS approach according to Norfolk ALUS organizers were

presented.

Chapter 3 - Social Capital and Trust

A Synthesis of the Literature in Sociology and Economics

3.1 Introduction

Sociology and economics both offer explanations of social capital and trust; however, while economics and sociology have much to say on these topics, analyses can be conflicting, both within and between disciplines. An appreciation of the understandings from disciplines which typically encourage different approaches to the creation of knowledge can provide a more holistic understanding on the topics of trust and social capital.

This literature review integrates insights from both economics and sociology within categories of social capital and trust that frequently appear in the literature. There are some cohesive ideas, and dilemmas within and between disciplines, which are observed throughout the chapter. There is an abundance of literature in both the disciplines of economics and sociology on the topic of building trust and social capital in communities and societies. However, to the best of my knowledge, there has not yet been an integration of these concepts across disciplines. Economic and sociological theory can highlight potential issues and characteristics that are paramount in the successful delivery of environmental goods and services. There were a number of other themes that I considered exploring in this literature review, including program uptake studies, diffusions of innovations, theoretical conceptions of pilot programs, and community-based social marketing. However, it was not practical to include all of these themes in my

literature review, in the interest of cohesiveness and completing my thesis in a timely manner.

The thesis of this chapter is that trust and social capital are explanatory factors in understanding the participation of farmers in payments environmental goods and services programs. The purposes of this literature review are manifold: to define trust and social capital in the context of my research; to review contributions from the sociology and economics literature; to relate literature on the topics of trust and social capital to my research problems and hypothesis; and to see whether the literature suggests that trust and social capital are relevant to my research problem. To refresh the reader, my research problem is to achieve an understanding of the critical success factors that contribute to the development of community capacity for Payments for Ecological Goods and Services (PEGS) programs, and specifically to examine whether the ALUS approach encompasses these critical success factors.

The literature review was key in informing my conceptual framework, and directing my thinking about my research problem and proposition. As this thesis went on, I found the need to add to my literature review, as important themes emerged as key to my research. These themes included: participatory processes; community capacity and PEGS program objectives.

3.2 Social Capital: Introduction

This section of my literature review summarizes a short history and definitions of social capital; and answers three general questions: 1- What is social capital? 2- What are the sources and consequences? And 3- what are the strengths and weaknesses of social

capital, both in society and as a concept? Applications of the concept to my research are discussed throughout.

3.3 Background: History and Definitions

Three scholars are generally given credit for bringing social capital as a concept to the fore of academic study, as well as a popular idea in common parlance. Baron et al. (2000) accredit Bourdieu (1970, 1977, 1985) Coleman (1985, 1988, 1990) and Putnam (1993, 1995, 1996, 2000) with launching the concept of social capital in its most recent form.

Bourdieu (1968) finds parallels between cultural capital and social capital. He treats these as instrumental concepts, where sociability with one's community can bring about positive results. Anheier et al (1995, page 859) write that "Bourdieu positions actors within a social space… according to economic, social and cultural characteristics," By social space, Anheier refers to a set of relations contained within a structure. DeNooy (2003) adds that Bourdieu believed that subjects (people or institutions) derive social meaning from their position within a greater social space, and with respect to others in that social structure. Bourdieu (1985, page 248) describes the concept of social capital as "the aggregate of the actual or potential resources which are linked to the possession of a durable network of more or less institutionalized relationships of mutual acquaintances or recognition." Portes (1998, page 4) interprets Bourdieu's definition in two elements: first, the social relationship itself gives access to resources possessed by their associates; and second, there can be variability in the size and quality of those resources.

Coleman et al. (1985) use insights from sociology and economics to further elaborate on Bourdieu's observation of parallels between cultural capital and social

capital, as well as operationalize social capital within empirical analysis. Coleman (1988, page S98) defines social capital as "a variety of entities with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors – whether persons or corporate actors – within the structure." To Coleman, social capital is embodied in the relations among people. Coleman (1990, cited from Szreter, 2000, page 61) argued that "a proper understanding of the workings of a market-oriented economy requires the recognition of four analytical categories: 1 – biophysical capital: land and the environment, 2 – financial capital, 3 – human capital, 4 – social capital."

Finally, according to Baron et al., (2000) Putnam (1993) made the concept "globally accessible and policy relevant." Putnam highlights the 'capital' component of social capital within its definitions. Putnam (1995, page 67) defines social capital as the following: "By analogy with notions of physical capital and human capital--tools and training that enhance individual productivity--"social capital" refers to features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit." In this case, it is the social connections that allow for people to work together more effectively, which can positively benefit individuals within the group. He generally views social capital as norms of reciprocity and networks of civic engagement. Putnam also brought social capital to the forefront of policy debate. He and President Clinton famously exchanged words over social capital in America.

Since dialogue about social capital emerged, many authors have defined and provided conceptualizations of the idea. According to Maskell (2000, page 111, Baron et al), social capital refers to "the values and beliefs that citizens share in the everyday dealing and which give meaning and provide design for rules…'capital' implies we are

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dealing with an asset… 'social' tells us that it is an asset attained through membership of

a community." In contrast, Robison et al (1999, page 5) call for a more restricted

definition of social capital, and they describe it as "service potentials derived from social

relations." Szreter (2000, page 57) clarifies about where social capital exists: "Social

capital flows from the endowment of mutually respecting and trusting relationships

which enable a group to pursue its shared goals more effectively than would otherwise be

possible… [it] therefore depends on the *quality* of the set of *relationships* of a social

group." It follows from this definition that social capital can never be possessed by an

individual in isolation; instead, it results from the interactions of people in a group or

community.

W.E. Baker (1990, page 619), defines social capital as a "resource that actors

derive from specific social structures and then use to pursue their interest; it is created by

changes in the relationships among actors." In this definition, Baker recognizes the

dynamic component to relationships, and views social capital as a resource that is

consummatory in and of itself. Burt (1992, page 9), on the other hand, defines social

capital more broadly, as "friends, colleagues, and more general contacts through whom

you receive opportunities to use your financial and human capital." Unlike Baker, Burt

views social capital as an instrument to greater success and benefits.

Portes (1998, page 6) summarizes the social capital literature up to his point in

writing as congruent upon the idea that actors secure the ability to benefits from

memberships in social networks and other social structures. Woolcock (1998, page 70)

affirms this summarization in noting that social capital refers to the "norms and networks

that facilitate collective action." For my own purposes, I've defined social capital as the

enhanced capacity to resources, accrued due to relationships within networks, the trust

that exists between those individuals, and the norms imposed within those networks.

3.4 What is Social Capital?

When explaining social capital, many authors describes it with reference to other

types of capital, such as financial or economic capital, human capital and natural capital.

Szreter (2000) notes that social capital, like other forms of capital, has productive

significance. Robison et al (1999, page 6) describe economic capital as "an accumulation

of foregone consumption, an amount saved for later use," or the resources used in

producing goods and services. Accordingly, they note that human capital is the

investment in education and skills in individuals. They (Robison et al, 1999, page 6)

follow with an explanation of social capital, as "a person's… sympathy or sense of

obligation toward another person of group that may produce a potential benefit,

advantage, and preferential treatment for another person… beyond that which might be

expected in an exchange relationship." In this description, sympathy, or the sense of

reciprocity, is the resource that social capital produces. What distinguishes social capital

is the level at which it exists; social capital exists within a relationship. To this point,

Maloney et al. (2000, page 213) note that unlike other capitals, it is not the property of

individuals or institutions: it inheres in the relations between actors and is drawn upon to

facilitate collaborative actions. These relationships then have the potential to produce

added benefits for those involved. Schmid (2002, page 751) writes that "individuals can

invest in relationships to increase the affinity others have for then and they have for

others." He specifies that social capital can be understood as the property of individuals,

however it can only be described as produced and substantiated within a relationship.

Norm of Reciprocity

The benefits that can be accrued from social capital are invested in the relationships between people. Portes (1998) argued that social capital can be experienced in two ways: either directly in a relationship between two people, or else it can be conferred among members of a community due to the norms within that community. The latter phenomenon is the accumulation of obligations, which is referred to as the norm of reciprocity. Portes (1998) further commented that norms of reciprocity are distinguishable from neoclassical economist's perfect market exchanges in at least two ways: first, the currency in which these obligations are repaid do not have to be consistent or officially sanctioned, and the timing of repayment is unspecified.

Many scholars, for example Baron and Hannon (1994) note that in order for something to be considered a 'capital', it must include an opportunity cost. While some authors maintain that social capital does not contain an opportunity cost, I believe that there is a cost to investing in a relationship. This can include the time and effort spent in cultivating this relationship, and the possibilities for placement of this effort elsewhere. Castle (1998, page 623) remarks that "capital in any form qualifies only as capital if it makes humans more productive when they use it in combination with other forms of capital." Finally, Szreter (2000, page 62) believes that sustainable, optimal growth requires paying equal attention to the development and reproduction of all four forms of capital together (economic, physical, human and social capitals).

Table 3.1 compares human capital to social capital. This comparison highlights some of the ways in which social capital differs markedly from the other capitals, but that

it can also highlight some important aspects that would otherwise be missing in social

analyses.

Table 3.1: A Comparison Between Human Capital and Social Capital

	Human Capital	**Social Capital**
Focus	Individual	Relationships
Measures	Duration Qualifications	Membership/participation Trust levels
Outcomes	Direct: Income, productivity Indirect: Health, civic activity	Social cohesion Economic achievement More social capital
Model	Linear	Interactive/circular
Policy	Skilling, accessibility and rates of return	Citizenship, capacity-building and empowerment

Source: Table taken from Baron, Field and Schuller, 2000, page 250.

3.5 What are the Sources and Consequences of Social Capital?

In discussions of social capital, many authors attempt to distinguish between the sources of social capital, and the resources that are created from social capital. Schmid (2002, page 747), for example, argues that social capital is a function of its sources rather than its consequences, and it enhances the realization of productive possibilities of physical and human capitals. Social capital, in this view, has implications for decision-making, by stimulating trusting and non-opportunistic behaviours. Portes (1998) identifies that sources of social capital can either be instrumental or consummatory in nature. He typifies instrumental sources of social capital typified as those that serve directly as a means to a different goal. He (Portes, 1998, page 7) writes that instrumental sources of social capital, includes the "accumulation of obligations from others according to the norm of reciprocity." On the other hand, consummatory sources of social capital are viewed as completed and desired as existing as social capital itself. Portes (1998, page 7) describes this as "the internalized norms that make such behaviours possible are then appropriable by others as a resource." Examples Portes (1998) gives include payment of debts on time, giving to charity, and obeying traffic rules. The actions and behaviours of individuals in a community can contribute (as well as detract from) the stock of social capital present at any given time. Different sources of social capital lead to different consequences at the group or community level.

While Portes (1998) distinguishes between these two sources of social capital, I believe that they are actually quite similar. Both types of social capital are desirable for their ability to improve the livelihoods of people who engage in those relationships.

While these sources might be distinguishable theoretically, I do not think that pragmatically, we can point to sources of social capital as exclusively instrumental or consummatory. As Dasgupta (2000, 334) notes, "trust and reputation are rather like knowledge; they are valuable both intrinsically and instrumentally." This statement holds true for social capital as well.

Norms, networks and trust are often stated as the three key components of social capital development. As Stolle (2001, page 202) writes, "networks of civic engagement, norms of reciprocity and trust constitute the heart of social capital." Each component is described, in turn.

3.5.1 Trust as a Component of Social Capital

There are many authors who put forth the idea of trust as a component of social capital (e.g. Dasgupta, 2000, Putnam, 1995, and Luhmann, 1988). Onyx and Bullen (2000, page 24) describe trust in the context of social capital: "Trust entails a willingness to take risks in a social context based on a sense of confidence that others will respond as expected and will act in mutually supportive ways, or at least that others do not intend harm." Fox (1974) suggests that trust can be thought of as both rules and relations. Baron et al (2000) agree, and they summarize, "rules include both formal and informal understandings, whilst relations are construed in terms of interdependence, communication, supervision and authority." Social capital is intimately connected with the relations component of trust. Fukuyama (1995, page 33) writes that the crucible of trust is social capital. He also maintains that social capital arises from the presence, and even prevalence of trust in society. Finally, he notes while trust is an expectation, it leads to action. Robison et al. (2000, page 2) write that a person who trusts another person

"will place resources at risk of being lost to the possible opportunistic behaviour of others." Trust allows for the accumulation of resources by making transactions that would otherwise have hindrances, more feasible, or less risky.

A scholar's treatment of trust and social capital tends to depend on which discipline they associate with. Sociologists, according to Portes (1998, page 18), tend to be "grounded on relationships between actors or between an individual actor and a group… [they] focus on the potential benefit accruing to actors because of their insertion into networks or broader social structures." Economists, on the other hand, tend to focus on individuals, their reputations and the what trust and social capital mean for the risks involved in transactions. Long-term relationships at the community level can foster an environment of trust that allows for cooperation in society. These relationships are contained within networks, the next key component of social capital.

3.5.2 Networks as a Component of Social Capital

Networks are a second component of social capital. Networks are the vessel of individuals, with relationships between them. It is within the network that social capital is developed. Castells (1996, page 470) defines a network as a set of interconnected nodes, including "open structures, able to expand without limits, integrating new nodes as long as they share the same communication codes." In this definition, nodes can be understood as individuals, and communication codes as the information that flows through these relations. It is these relationships, and the network of these relationships, that enable us to take on cooperative endeavours.

Social network theory explains many of the attributes of networks in connection to the study of social capital. According to Baron et al. (2000, page 19) norms and

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information flows are seen as essential features of functioning networks. "Social networks analysis stresses the relationships among social entities and the patterns and implications of these relationships… its key assumptions are that actors and actions are to be viewed as interdependent rather than dependent, and that the relational ties between actors are channels for the transfer or flow of material and non-material resources." Social network analysis stresses the relationships among social entities, and the patterns and implications of these relationships, and describe the extent of cooperation and interaction in a community.

Maloney et al. (2000, 213) note that "networks provide channels along which information flows and support the development and application of norms and sanctions." Thus, associations, groups, or networks can be seen as sources of social capital. Bott (1957) adds that the power of a connected network includes generating and imposing norms on individuals. Networks, she determines, mediate between the personal and the structural aspects of relationships. Norms are discussed in the following section.

3.5.3 Norms as a Component of Social Capital

Onyx and Bullen (2000, page 24) describe norms as providing an informal form of social control; they write, "social norms are generally unwritten but commonly understood formulas both for determining what patterns of behaviour are expected in a given social context and for defining what forms of behaviour are valued or socially approved." Heimer (2001, page 55) writes that norms can be seen as pressure to conform from community members having a common stake in an actor's trustworthiness. Heimer (2001) also differentiates between economic exchange (one-shot exchange of goods) vs. social exchange (continued social interactions). With this distinction in mind, Granovetter

(2000) notes that people embedded in communities are more trustworthy because they are committed to this continuity in relationships, and focus of social exchange rather than economic exchange. It is this embeddedness that encourages internalization of norms of trustworthiness and 'civic virtues' (as Stolle labels it, 2001); and this identification of one's group supplements calculation of long term, self-interested rational calculation.

Portes (1998, page 7) writes that internalized norms make cooperative behaviours possible, and then these norms become "appropriable by others as a resource." Schmid (2002, page 748) describes this process as people learning to do the 'right thing' through a process of socialization.

Fukuyama (1995, page 9) seeks to explain circumstances that favour success in communities, cities and countries. He explains trust in terms of commonly shared norms in a community, "formed not on the basis of explicit rules and regulations but out of a set of ethical habits and reciprocal moral obligations internalized by each of the community members." Thus, for Fukuyama, trust is founded on shared norms within a community. Thus, norms that favour more exchanges can bring additional resources into the community that holds these norms.

A key norm for the development of social capital is the norm of reciprocity. Onyx and Bullen (2000, page 24) explain the norm of reciprocity as a "combination of short-term altruism and long-term self-interest," and note that it is distinguishable from immediate and formally accounted exchanges. It is the general expectation that kindness or services given at a personal cost will be returned at some point in the future, perhaps in a different form. Within the network, people are concerned about the interests of others as well as themselves.

3.5.4 Effects of social capital

Authors refer to the effects or consequences of social capital in their writings, though it is often anecdotally. Some examples include Maskell (2000, page 111), who writes that social capital "[enables] firms to improve their innovative capability and conduct business transactions without much fuss, substantial implications for economic performance and positive feedback loops." Robison et al (1999, page 9) write that social capital can lead to "greater degrees of horizontal connections, increased community cooperative action, strengthens linkages among individuals and can speed diffusion of innovations, improves the quantity and quality of information flows and reduces transaction costs, allows people and groups to pursue more risky and higher return activities because of pooled risks." These seem to be potential consequences of social capital, and it can be said that consequences will vary depending on the nature of the community or network in which this social capital takes place. Szreter (2000, page 65) writes that generally, the effect of social capital is that it "facilitates the maximum diversity and density of positive social relationships between individuals in the marketplace of work and production." This allows for the other capitals (human, physical, economic) to reach all of their more productive outcomes. The presence of social capital in a community has the potential for many spillover effects, including more social capital. The sources and consequences of social capital can thus be confounded and correlated. Perhaps this is part of the reason for the confusion of sources and consequences of social capital in the literature.

Social capital does not only result in positive effects. There can also be costs or drawbacks to social capital. As Coleman (1988, cited from Baron et al, 2000, page 214)

points out, "social capital is not completely fungible, but may be specific to certain activities." In this, he suggests that a given manifest of social capital may be useful in some activities, but may also be not of use, or harmful to others. Social capital may then be better interpreted by its use in terms of strengths and weaknesses, or benefits and drawbacks.

3.6 Social Capital and The Role of the Broker

The way that this is useful in analyzing my research is in conceiving the role of a PEGS program as a broker, and in understanding the advantages that could be accrued from this positioning. PEGS programming can act as a mediator, or a broker, between the farmers on the one hand and multiple funding sources, including: the government; organizations that wish to green their image; and potentially individuals who wish to financially contribute to environmental programming. By maintaining this position as a broker, PEGS programs have the potential to improve informational quality to parties on both sides, which can decrease transaction costs in PEGS programs.

Social capital and trust can have a direct impact on the quantity of goods and services exchanged in a transaction. Relationships and trust can also impact a farmer's decision to participate in a PEGS program, which itself is a type of transaction between farmer and those who demand Ecological Goods and Services (EG&S). PEGS programs can adopt the role of the broker, between farmers and funders, by managing information, bringing funds together, allocating them to farmers who supply acreage and mediating between interests of buyers and sellers. The discussion below highlights the roles of trust and social capital, informed by the observations and data from my case study, as well as social capital literature.

Robison and Ritchie (2010, page 142) consider social capital to be a part of "nearly every interpersonal exchange." They encapsulate this idea within a theorem, which they call the 'Social Capital Exchange Theorem'. They assert that there are two key points in the Social Capital Exchange Theorem, which are:

> 1. If a buyer and seller include socio-emotional goods in their exchange of an economic good, the likelihood of finding a mutually agreed price and exchange increases, compared to the likelihood of the same exchange without the inclusion of socio-emotional goods; and

> 2- If a buyer and seller include socio-emotional goods in their exchange of multiple units of economic goods, the number of goods traded increases, compared to the same exchange without the inclusion of socio-emotional goods."
> – Robison and Ritchie, 2010, page 142

Robison and Ritchie (2010) define socio-emotional goods as the outcome of social capital. Robison and Ritchie (2010, page 142) exemplify these needs as "the need to experience caring, the need for validation, and the need to be informed about each other, events affecting our lives, our surroundings, and the outcomes of our choices." These needs are met not in isolation, but in relationships and exchanges with other individuals. I believe that Robison and Ritchie's Social Capital Theorem is a useful concept, however their two key points seem to be artificially separated. The theorem, then, could be summarized as:

> If a buyer and seller include socio-emotional goods in their exchange of an economic good, the likelihood of finding a mutually agreed price and exchange increases, and the number of goods traded increases, compared to the same exchange without the inclusion of socio-emotional good.

Figure 3.1 illustrates the Social Capital Exchange theorem, and the way in which the quantity of goods or services increases when social capital is theoretically introduced into the supply/demand graph.

Figure 3.1: The Effect of Including Social Capital on Exchanges in Markets
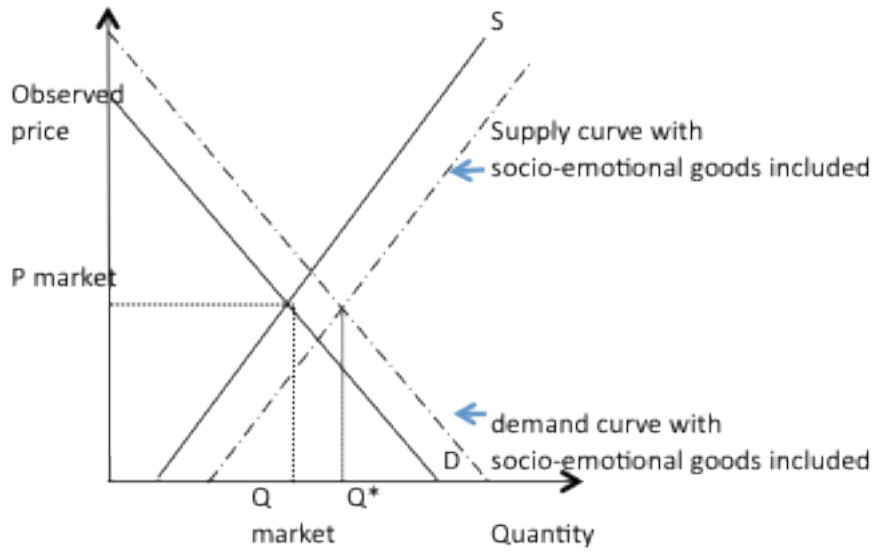
Note: This graph was replicated from Robison and Ritchie, 2010, page 144.

Robison and Ritchie (2010) explain that the inclusion of socio-emotional goods in market exchange results in a shift of the supply curve to the right, as well as a shift in the demand curve to the right. This is because with each unit of good sold/received, there is also a quantity of socio-emotional goods that are exchanged. When considering the inclusion of socio-emotional goods, the seller would be willing to offer the same amount of goods at a lower price, while a buyer would be willing to buy the same amount of goods at a higher price. In this explanation, both these curves shift simultaneously, which results in a higher quantity of goods exchanged (Q $\rightarrow$ Q*), while the effect on price is indeterminate. This is how the role of social capital is conceptualized in an exchange.

3.7 The Effect of Social Capital on Transaction Costs

The organizers of a PEGS program act as a broker, or an intermediary, between those who supply EG&S (farmers) and those who demand it (funders). In the role as a broker, a PEGS program can increase the incidence of trust and social capital, and decrease the transaction costs in an exchange, as the following section highlights. Coase (1960) categorized transaction costs into three subcategories: search costs, negotiation costs, and concluding costs. This discussion is largely informed by Robison and Ritchie (2010, pages 151 – 154) and Fox (2008). For more information on the theory behind social capital as it relates to transaction costs, please refer to Section 3.7.2.

- Search Costs

Fox (2008, page 125) writes that "search costs are incurred during the process of looking for potential partners for a market exchange." Social capital and trust have the potential to decrease search costs. For example, search costs can be reduced through the use of existing relationships and networks to locate suppliers of EG&S, as well as savings

incurred from when word-of-mouth is an effective advertisement for the program, thus less program marketing may be necessary.

Another way in which social capital can reduce search costs, according to Robison and Ritchie (2010), is that social norms and networks can include an incentive to share information with those whom you share a sympathetic relationship. This is because the sharing of information that will benefit another individual within a common network can enhance the social capital between the two individuals. In additional to information sharing, Robison and Ritchie (2010, page 153) add that "information shared in social capital-rich networks has an important advantage of being viewed as reliable, which can help bring credibility to the terms of trade." When someone appeals to social capital in an exchange, she has different assumptions about her trading partner, who may no longer be a self-interested automaton; instead an actor would have supplementary knowledge about her trading partner's reputation, and might know her to be an honest and trustworthy individual. Social capital can provide motivation and inventive to share information, and reduce costs associated with searching for exchange partners.

- Negotiation Costs

Fox (2008, page 125) defines negotiation costs as the value of the costs that "arise when a potential exchange partner is identified and the terms of that exchange are being explored." This, he writes, may be especially pertinent in cases where potential market transactions are not as familiar and no fixed-price exists for a particular EG&S.

Social capital has the potential to be a partial substitute for legal guarantees (Nooteboom, 2003). Costs that might ordinarily be associated with the creation and bargaining of drawing up a contract may be reduced when there is a pervasive norm of following through on the terms of trade. Social capital, in this case, provides incentive for

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people in the community to respect terms of trade, for reasons such as the building of respect, ease of conscience, caring about community members, maintenance of reputation, etc.

- Concluding Costs

Finally, Fox (2008, page 125) explains concluding costs as those that "according to Coase, arise as the parties verify that the terms of the exchange were met." Also known as monitoring and enforcement costs, these include the measures taken to ensure that an agreement is completed according to the terms of exchange. As an exemplification, Fox (2007, page 380) notes, "concluding costs may be influenced by a shared value of honest dealing in a society. Reputation and trust can play a role in this environment. Repeated dealings, or the prospect of repeated dealings, provide an incentive for people to fulfil their parts of an agreement to exchange." This example is one way in which concluding costs can be lowered with the presence of trust in a longer-term relationship. Robison and Ritchie (2010, page 153) adds that "part of the reason why so little formal documentation to the transaction is required is that breaking the agreement would result in the loss of highly valued social capital." They add that commitment and obligation can be substitutes for monitoring. Social capital can act as a means for ensuring that trading partners stick to the agreement made.

Incorporating social capital and trust into an exchange increases the likelihood and level of exchange. This line of thought challenges traditional neo-classical economic theory, which, according to Kaufman (2007) does not assume that relationships do not affect the equilibrium price and quantity, or terms of trade in transactions. Traditional rational perspective, according to Ostrom (1991, 1992) and others (Bromley 1992, Jentoft

et al 1998) views actors as seeking to maximize individual gain, and it worthy of criticism.

A few of the many benefits of considering the role of social capital and trust, according to Robison and Ritchie (2010, page 31) includes, "increases in social capital promotes cooperative actions, alters terms and trade and levels of trade, encourages exchanges, reduces free riding, internalizes externalities, and increases investments in public or high-exclusion cost goods… and leads to creation or support for formal and informal institutions and networks." Trust and social capital are important contributions to understanding the ways in which exchanges are made, because it reflects the social nature in the ways in which people interact in exchange relationships, in determining their decision to participate in PEGS programs.

3.8 Strengths and Weaknesses of Social Capital

Many authors allude to the importance of considering both the benefits and the drawbacks of social capital. This evaluation can be considered both for social capital's strengths and weaknesses as a concept, as well as the benefits and drawbacks as it exists in society. Each of these is considered in turn.

3.8.1 Benefits of Social Capital in Society

Putnam (1996, page 67) notes that life is simply easier in communities that have high levels of social capital. He justifies this statement with a number of reasons:

> In the first place, networks of civic engagement foster sturdy norms of generalized reciprocity and encourage the emergence of social trust. Such networks *facilitate coordination and communication, amplify reputations*, and thus *allow dilemmas of collective action to be resolved*. When economic and political negotiation is embedded in dense networks of social interaction, *incentives for opportunism are reduced*. At the same time, networks of civic

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engagement embody past success at collaboration, which can serve as a *cultural template for future collaboration.* Finally, dense networks of interaction probably broaden the participants' sense of self*, developing the "I" into the "we," or (in the language of rational-choice theorists) enhancing the participants' "taste" for collective benefits.* [Italics are my own]

In his writings, Putnam (1996) correlates social capital to prosperous societies. He tends to view social capital as exclusively a good thing for communities and society. Szreter (2000, page 57) agrees with Putnam, albeit more cautiously. He views social capital as having the capacity to accrue productive benefits to society. He explains that this is because of the synergy of mutual trust that exists in societies with higher levels of social capital.

3.8.2 Social capital and Information

The issue of information is important in understanding the ways in which markets function. Social capital can contribute to this understanding, especially in cases where market experience is limited, such as a market for delivering EG&S in Ontario. Szreter (2000, 61) writes that social capital "can show how the politics of a society and its particular mix of institutions critically influence the distribution of information-processing capacities among its citizens and so, ultimately, affect the efficiency and growth potential of the economy." The concept of social capital allows the focus to be on the distribution of individual's capacities to process and communicate information across a community or network, and helps to account for whether information can be transmitted easily and effectively.

Discussion of information and social capital fits in with an examination of transaction costs in the emergence of a market for EG&S. The way in which it is related is that information enables us to make choices about the way we value goods and

services. We take the information about what these goods or services can do for us now, and what its current or future alternatives are. This allows us to make a choice about whether it is important to us, whether we choose to invest in it, and better calculate the returns to this investment. Szreter (2000, page 62) writes, "from a normative economics viewpoint, social capital can be briefly defined as that general set of relationships which minimizes the transaction costs of information across the whole economy." Social capital allows for a higher quality of information (norms and trust), and a greater distribution of information (networks), through the ties and relationships that are generated through this resource. Social capital can thus be understood as facilitating more effective communication between people.

Burt (1997, page 340) discusses the idea of 'structural holes' in his conceptualization of social capital. He describes this as defining "social capital in terms of the information and control advantages of being the broker in relations between people otherwise disconnected in the social structure." There are advantages to being the broker in terms of exploiting informational gaps in formalized organizational structure. The way in which these benefits are accumulated is through the mobilization opportunities of the information contained in informal networks. He suggests that the strength of weak ties can be advantageous to those involved, which builds on Granovetter's work on the strength of weak ties.

Also, if it is accepted that the values of environmental resources, like air and water and wildlife, aren't fully realized in society then they are potentially underprovided. Social capital can be a way in which this information of the value of these resources can be communicated. If protecting the environment becomes a norm within a

network, then the importance of these resources to society might be more fully realized. Thus, social capital can be a way of communicating information that is not currently in a market.

3.8.3 Drawbacks of Social Capital in Society

Coleman (1988) warns that social capital can both facilitate and constrain communication capacity and mobility. Social capital can also be limited to existing within exclusionist groups. While social capital that exists within their relations can bring benefits to their group, it is limited in its productive capacities; it would be bound by the membership of the group. The contrast that highlights this issue is often made in discussions of bonding and bridging social capital. Very simply, Schmid (2002, page 756) describes bonding social capital as "feelings of one member of a collectivity to another (such as within a family or a firm)," whereas bridging social capital entrails "feelings of a member of a collectivity toward a member of another collectivity." It is generalized that bonding social capital has the tendency to exclude non-members, and so it is limited it its potential to bring resources into a community. Portes (1998, page 8) adds to this noting that, while bonding social capital can create solidarity amongst a group of people, it is those same forces that prevent those on the outside from gaining access to the resources generated by this social capital. Social capital can be used to exclude or limit participation, and has the potential to become the focus of conflict between individuals. Portes (1998, page 15) lists three additional potential negative consequences of social capital. First, there can be excess claims on group members. This is an opposite effect from the first negative consequence, in that there can be free-riding issues within the group that prevent people from enjoying the full rewards from their

efforts. Second, there may be restrictions on individual freedoms. There are instances

where participation in a group may create a demand for conformity to the group. This has

the potential to lead to reduced privacy and autonomy, which take away from the rights

of individuals. Third, a negative consequence can include downward levelling norms. If a

group is congregates around common experiences of adversity, success may be viewed as

weakening group cohesion, perpetuating the original situation. Alternatively, some

authors, for example Baron et al. (2000) observe social capital as having the potential to

further marginalize those people who do not have the resources to reciprocate in the first

place. In this sense, social capital can re-enforce social divisions. Finally, Portes (1998,

page 4) notes that generally, the acquisition of social capital requires an investment, both

economic and cultural. He also notes that these relations can be characterized by less

transparency and more uncertainty[1], compared to economic capital.

3.8.4 Strengths of Social Capital as a Concept

There are many ways in which social capital is useful in literature across

disciplines. Baron et al (2000) note that trust is often treated in a technical or econometric

manner in policy-making, but the treatment of social capital allows for more complex

modelling of social relations, which is more true to its multifarious character. They

(Baron et al., 2000, page 14) write "interaction and complexity are the hallmarks of the

world as we experience it, even if it does not appear so on the charts of bureaucrats or in

the models of analysts." Baron et al (2000, page 13) also evoke the idea that social capital

is a vehicle by which focus can be placed on the quality of relationships between people.

They suggest that we may be witnessing a "revalorization of social relationships in

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[1] Examples Portes (1998) offers include: unspecified obligations, uncertain time horizons, and the
possible violation of reciprocity expectations.

political discourse." They infer that the academic literature seems to be attempting to bring a social dimension to understanding economic relations.

Social capital is a useful concept in bridging otherwise usually discrete disciplines, such as economics and sociology. As Coleman (2988, page s95) notes that both disciplines have their own rationales of human actions and purposes. Sociologists, writes Coleman (1988, page s95), view "[socialization] and actions governed by social norms, rules, and obligations." Here, the social context constrains the actor's actions. He notes that economists, on the other hand, view an individual as utility maximizing and self-interested. If we accept that humans are motivated by more than just narrow greed, then social capital absorbs the pursuit of complex social and individual goals. Social capital also allows to social frictions to be brought into an explanation of motives and decision-making, as the emphasis is on relationships rather than individuals. Baron et al. (2000, page 38) write "social capital has the potential to be a sophisticated and flexible instrument for assessing and evaluating the implications of our actions." They applaud social capital's use for challenging existing modes of thinking in conceptualizing social relations.

The same attributes that make it a strong concept make it particularly useful in my own research. Evaluating the implementation of PEGS programs in Ontario requires assumptions of an entirely different nature to the kind of assumptions made in neoclassical economics. PEGS programming's success depends highly upon trusting relationships, and so social capital is a vessel through which these relationships can be brought into my research.

3.8.5 Weaknesses and Criticisms of Social Capital as a Concept

Baron et al (2000, 24) comment on the difficulty that social capital has of being accepted by academics in many disciplines. They write: "In the case of the other 'capitals', physical, financial and human, they appear to command a far higher degree of consensus than social capital in the way they are deployed… The question for social capital is whether a term that can be defined so variably has failed to attain a proper status of accepted intelligibility." They directly point to the lack of consensus on a definition as a major weakness of social capital. Being the newest of the capitals to be introduced into academia, it is a relatively immature subject. But, as Baron et al. (2000) note it has spread very quickly and, there have been a variety of methods used as approaches to the study. They also write that it is over-used, and over-applied to a broad range of social issues.

MacGillivary and Walker (2000, page 201) discuss the notion that some social scientists and economists wish to measure social capital, however, there is no practical way of assessing social capital 'behind people's backs.' They note that there are observer effects, which directly negatively affects stock of social capital present in the community. Some examples of negative researcher effects include: she may not be able to record everything that is going on, she may misunderstand what they do record, participant fatigue, suspicion of outsiders, and lack of timely feedback. This questions the concept's coherence, and validity. There are limitations to the social experiments that can be done, due to the difficulties in untangling social capital from events that occur in the real world. Also, it can then become difficult to measure with quantitative data, as the quality of the proxies can be often be questioned in their representativeness.

Baron et al. (2000, page 29) bring up circularity as an often-made criticism against social capital. They write that "social capital is frequently treated as a means to a greater social end, and it as treated as an end itself. " Thus, the concept is used both as a cause and an effect. This was addressed earlier in the confusion between the sources and consequences of social capital. Others may criticize this as tautological. However, Baron et al (2000) cite Boix and Posner in observing that the causes and effects of social capital are intricately interconnected; and so while some may criticize this as circularity, others may tout the concept in its ability to capture the reality of social relations.

3.9 Trust: Introduction

According to Seligman (1997), Francis Fukuyama (1995), and Robert Putnam (1993, 1995), have been credited with the re-emergence of the analysis of trust, and more specifically, with bringing it into the inquiries of social scientists. In their writings, Fukuyama (1995) and Putnam (1993, 1995) argue that trust is an essential condition for both social cooperation and for efficacious political and economic performance. Given this new attention to the concept of trust, many definitions and approaches to its study have emerged in the literature. However, there is much disagreement over the very fundamental components of trust amongst social scientists. However, Cook (2001, page xxvii) also notes that although there is not a clear consensus on the precise meaning of trust, many trust articles make the point that "trust plays a significant role in the functioning of social groups and societies… [it is a] bedrock for social cooperation." Trust can be an important explanatory variable in the everyday workings of social groups.

In the following sections, I investigate several scholars' conceptualizations of trust, within categories identified in the literature. This section is outlined as follows:

first, I discuss definitions of trust; then, I outline general conceptions of trust in economics and sociology; next, I analyze trust within categories commonly found in the literature; and finally, I present a few conceptual clarifications on the notion of trust. In the subsequent chapter, I will explain how the concept of trust is related to my research.

3.9.1 Trust: Background and Definitions

Before the descriptions of various forms of trust in the following sections, I offer a few generalized definitions. Gambetta (1988, page 217), upon editing a volume of a collection of pieces about trust, converged the authors' findings into the following definition:

> Trust (or, symmetrically, distrust) is a particular level of the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action, both before he can monitor such action (or independently of his capacity ever to be able to monitor it) and in a context in which it affects his own action.

He makes several important points in this definition. First, trust is a subjective assessment made by an agent in a relationship. Trust involves belief about another human's (potential) future actions. He (Gambetta, 1988) suggests that trust has a threshold point, which, when it is passed, instigates a belief of trustworthiness in the trustor. As such, he directly connects trust to taking an action, or decision-making. He only includes the instances where trust is a belief bestowed upon another individual or group of individuals, and so trust in non-humans or inanimate objects is excluded in his conception. Gambetta (1988, page 217) further writes, "when we say we trust someone, or that someone is trustworthy, we implicitly mean that the probability that he will perform an action that is beneficial, or at least not detrimental to us is high enough for us to consider engaging in some form of cooperation with him." By this, he implies that that

the potential future transaction must be in some way beneficial, or at least not detrimental (the benefits outweigh the costs), for a trusting relationship to emerge.

There are many other definitions of trust offered in the literature. For example, Dasgupa (1988, page 51) defines trust as the "correct expectations about the *actions* of other people that have a bearing on one's own choice of action when that action must be chosen before one can *monitor* the actions of those others.[2]" Korczynski (2000, page 2) defines trust as the "confidence that the other party to an exchange will not exploit one's vulnerabilities." Nooteboom (2002, page 48) has a similar definition, with a few added elements: "[trust is] the expectation that a partner will not engage in opportunistic behaviour, even in the face of opportunities/incentives for opportunism… [he/she] behaves in a predictable and mutually expected manner. Finally, Fukuyama (1995, page 26) defines trust as "the expectation that arise within a community of regular, honest and cooperative behavior, based on commonly shared norms, on part of other members of that community." Rousseau et al. (1998, page 393) summarize the importance of trust; they note that it leads to many positive outcomes, including "enables cooperative behaviour, promotes adaptive organizational forms, reduces harmful conflict, decreases transaction costs, facilitates rapid formulation of ad hoc work groups, and promotes effectives responses to crisis." They note that two critical elements of trust are positive expectations and the willingness to enter into a position of vulnerability.

There is a wide variety in the meanings that authors attach to this concept, and the sample of definitions offered above is certainty not exhaustive. Due to this wide variety, and often times conflicting understandings of the term, I have organized the findings in

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[2] Gambetta's (1988) own emphasis in italics

the literature on trust into several categories. In this sections that follow, I will briefly explain the meaning of trust from the point of view of each category.

Finally, I would like to offer one final definition of trust. The following is a working definition from my own conceptualizations: *Trust is a belief involving positive expectations about the behaviour of another person, upon which an agent bases his/her willingness to make a present decision to interact.*

3.9.2 Trust from an Economic Perspective

The concept of trust is used in multiple different ways in economics and sociology. The intention of this section, and those that follow, is not to conclusively settle these differences, but to offer an exposition of the term. There are some common themes or generalizations across different conceptualizations of trust in the economics literature.

First, a common generalization about trust, is a longer time frame, and repetitive encounters agents have, the more likely they are to engage in trustworthy behaviour; for examples, see Powell (1990); Williamson (1993); Korczynski (2000). In one instance, Powell (1990) writes, "social scientists do agree that reciprocity is enhanced by taking a long term perspective." There is also the notion that trust can have a positive effect on individuals or organizations where it is present in interactions. In other words, trust has the capacity to boost the benefit/cost ratio of an exchange. There are, however, costs to trust as well. Another often-made point is the higher the level of trust, the higher the likelihood of cooperation. Gambetta (1988, page 223) adds that cooperative behaviour does not depend on trust alone, and the optimal threshold of trust will vary according to the occasion.

Rationality and trust is an issue which appears to be more consistent within disciplines. Views on rationality is one issue that divides economists from sociologists on matters of trust. Ingham (1996) generalizes about economists' treatment of trust; he notes that economists' actors, when decision-making, "stress the processing and accumulation of 'adequate knowledge of probabilities'." About sociologists, Ingham (1996, page 250) writes that their approach to trust puts the emphasis on "an element of belief or legitimacy in the face of… just not knowing and having no objective (positive -) basis for our expectation." From these generalizations, Korczynski (2000) extrapolates that from these assumptions about rationality, the sociologist's agents will be more likely to trust than the economist's agent.

3.9.3 Trust from a Sociological Perspective

The following section notes the consistencies that I have found in the writings about trust in sociology literature. First, trust from a sociological perspective is commonly viewed as a dynamic entity. Heimer (2001) is an example of an author who views trust as dynamic. She enumerates four forms of trust relations, including faith, confidence, legal trust and trust/distrust. Heimer (2001) summarizes her view of trust as seeking or offering information in order to reduce uncertainty. Within trust relations, there are problems that arise over time from our vulnerability to others, and our uncertainties about their intentions and abilities. The amounts of uncertainty and vulnerability present in a given interaction varies across social situations, and across time; and so it would follow that the amount of trust that is required to overcome this issues changes over time.

A component of trust that is often dealt with in the sociology literature is the consideration of an ethical and a social motive in understanding behaviour. Without including these aspects in human behaviour, understanding of how cooperation emerges between individuals in a dynamic social setting is problematic. Seligman (1997) for example, considers trustworthiness to arise from moral dimensions of participants in interaction.

Sociologists, including Granovetter (1985) discuss social embeddedness of human behaviours. Granovetter (1985, page 490) stresses "the role of concrete person relations and structures (or networks) of such relationships in generating trust." He (Granovetter, 1985) views social institutions and sanctions as a reinforcing the persistence of trustful relationships. Williamson (1993, page 475) also writes to this tune; he says that man is a "social animal" and "socialization and social approvals and sanctions are also pertinent." Discussions of embeddedness, and acknowledgement of the institutional environment, can accommodate the social characteristics of human beings within greater society. Sociologists also often write on the topics of trust and social culture. One component of this culture is that it dictates the degree to which societal trust in a norm within a particular society. Williamson (1993, page 476) refers to this as 'trading trust' and notes that, "the main import of culture, for purposes of economic organization, is that it serves as a check on opportunism." It is this norm, or social pressure, that can encourage individual maintenance of trustworthy behaviours in relationships. Sociologists (according to Rousseau et al, 1998) are commonly assumed to focus on the group and society as their level of analysis in the study of trust.

3.10 Categorized Conceptualizations of Trust

Korczynski (2000, page 6) summarizes what he believes to be the dividing issue between sociologists and economists on the subject of trust; he writes that there is a broad divide between economists who "tend to understand trust as involving a form of incentive/governance structure" and sociologists who "look at social institutions, social relations, and knowledge of others' norms as the key bases of confidence regarding non-exploitation of vulnerability." The following sections attempt to overcome this divisive hurdle by categorizing trust by different conceptualizations of the term. Authors' contributions from both disciplines are highlighted below.

3.10.1 Trust and Game Theory

Many authors discuss trust within the study of game theory. Typically, the way that trust is discussed in the gaming context is through the prisoner's dilemma game. The original prisoner's dilemma is shown to result in a non-optimal equilibrium, with each agent at his or her third-order preference. However, if both parties believe that the other will not confess, then they could both obtain second-order preferences. Korczynski (2000, page 12) (as well as Axelrod, 1984 and Williamson, 1993) argued that when the game is repeated, "where parties' time horizons are not myopic, where parties can reflexively learn, and where participation is voluntary, cooperative non-confession can emerge" They label this endogenous trust, and has the result of increased cooperation amongst players. Rousseau et al. (1998) summarize this type of trust as derived from the calculus of gains and losses, weighed by perceived risks.

Axelrod and Hamilton (1981) examine the role of cooperation, both its initiation and its maintenance, through an evolutionary biology meets political science perspective.

They (Axelrod and Hamilton, 1981, page 15) note that "many of the benefits sought by living things are disproportionately available to cooperating groups." They conclude that trust is an evolutionary advantage, and so it has the tendency to be passed on biologically. The way in which the concept of trust enters into game theory is when two individuals meet more than once, an iterated game. The individual can then recognize a previous interactant and recall aspects of previously experienced outcomes. They suggest that groups who trust have an evolutionary advantage, due to the benefits that are obtained through cooperative and trusting behaviour.

Bacharach and Gambetta (2001, page 150) also consider trust via a gaming approach. They define trust as "the product of underlying trustworthy-making character features." They consider trust as a characteristic that is communicated by signals. They note that two hindrances to trust, which they call "trust enemies," are bad character and poor information. They also distinguish between primary and secondary forms of trust. Primary trust (Bacharach and Gambetta, 2001, page 150) is the notion that "a person trusts someone to do X if she acts on the expectation that he will do X." Secondary trust, on the other hand, include signals that indicated a person's trust-relevant characteristics. They list some examples of trust-warranting properties as "honestly, benevolence, love of children, low time preference, and sect membership." Secondary trust, or signals can induce primary trust, or trustworthy behaviour in transactions.

Williams (1988) attempts to bring insights from game theory into what he calls 'real life' by relaxing the assumptions of agent's rationality in game theory, to acknowledge the realistic bounds of individual cognitive abilities[3]. In doing so, he

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[3] Williams (1988) weakens these assumptions by acknowledging "real life truths about the cognitive limitation of real agents", including

incorporates the importance of trust for making decisions in game theory. Williams (1988, page 7) writes of the cooperation of agents in game theory as "engaging in a joint venture for the outcome of which the actions of each are necessary, and where a necessary action by at least one of them is not under the immediate control of the other." However, in order to enter into these dependent positions, there needs to be a motivating factor, some indication that the other agent will not defect. Williams (1988) maintains that this assurance is the notion of trust. Thus, Williams considers trust to be a motivation to a transaction, and not necessarily a component of the transaction itself.

Gambetta (1988, page 216) writes of the equilibrium that a traditional game of prisoner's dilemma reaches: "the outcomes converges on a sub-optimal equilibrium, even if both players might have been conditionally predisposed to cooperate." He further notes that the inherent problem is one of communication. To this, he (Gambetta, 1988, page 216) writes, "even if people have perfectly adequate motives for cooperation they still need to know about each other's motives and to trust each other, or at least the effectiveness of their motives." Like Williams, Gambetta (1988) writes that trustworthy behaviour can be one mechanism through which motives can be communicated.

It is, however, debateable whether or not trust plays a significant role in game theory. Traditionally, game theory rests on the assumption that actors are making rational decisions based on the information they receive. The behavioural patterns that emerge with iteration can be understood as uncovering more information about one's

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1 – people are imperfectly informed
2 – limitation may be imperfectly understood
3 – the acquisition of such knowledge may be costly or impossible
4 – there is a significant limit on the complexity of possible calculations
5 – preferences relevant to cooperation change
6 – the disposition to cooperate is cost sensitive

interactant, and using this data to predict their behaviour. This can result in cooperation, but cooperation does not causally imply trust. Williamson (1993, page 463) maintains that trust occurs outside of transactions; he states that there is no such thing as trust in economic activities: "it is redundant at best and can be misleading to use the term 'trust' to describe commercial exchange for which cost-effective safeguards have been devised in support of more efficient exchange." Moreover, game theory does not have the capacity to absorb the entire spectrum of the types of trust that authors have identified, such as institutional or system trust, which are discussed later in this section.

3.10.2 Trust as a Good or Commodity

Trust as a commodity or a good is often considered in a game theory context. However, there are a few additional characteristics that are worth discussing separately. Trust as a good is conceptually similar to the types of goods that we can purchase in markets. Hardin (2001) notes that in discussions of trust as a good, it is treated as something that can be created or destroyed. Dasgupta (1988), for example, treats trust as commodity in that it is something that can be supplied when there is sufficient demand. In this sense, there are benefits that are associated with the presence of trust in a transaction. Dasgupta (1988) also notes that there can be costs involved in honest and trustworthy behaviour. These costs are important to consider if trust is considered a substitute for contracts; this is discussed in a later section about trust and contracts.

Korczynski (2000, page 7) also notes that it is generally true that trust in that "[it] grows with repeated use." This raises some important conceptual difficulties with this comparison. If trust grows with use, what are its limits? Is it a finite commodity? Other

characterizations of trust considered here do tend to have bounds, and literature about trust as a good or commodity could be a forum through which this limit can be defined.

3.10.3 Trust as Social Capital

Social capital was already considered in-depth, for the first half of this chapter. However, there are many ways in which theorists view it role in relation to trust. I have highlighted one common way in which trust and social capital and intricately related. Whether trust is a source of social capital, or vice versa, is discussed in this section as well. Putnam (1995, page 67) "Social capital refers to the features of organizations such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit." According to Putnam (1995), social capital (or civic community) involves social trust, as well as norms and networks. This section focuses on the social trust element.

Mackie (2001, page 246) defines this social trust as "the capacity for collective action." He comments that the idea of social trust is strongly connected with democracy. The literature is divided about whether or not trust is a prerequisite to stable democratic rule (Almond and Verba, 1963; Inglehart, 1990; Mackie, 2001) or whether interpersonal trust is simply a consequence of democracy (Muller and Seligson, 1994). While there have been a number of hypotheses drawn to explain the social trust gradient across countries, this works tend to be focused on European counties. Stolle (2001), Tyler (2001), and others discuss trust as a component of social capital. Trust in this case is understood as an enabling characteristic, within social capital, that allows groups and societies to achieve various ends. Luhmann (1979) writes that trust can accumulate analogous to the way that other kinds of capital accumulate, such as natural or physical

capital. Coleman (1990), Putnam (1995) and Stolle (2001) view trust as a component of social capital, as both a result of, and as a precondition to, cooperation. Stolle (2001) expands on this, noting that 'generalized trust' is central to social capital. He distinguishes this type of trust from both 'private or personalized trust' (trust within personal relationships) and 'identity-based trust' (trusting those who fit into a specific social identity). Generalized trust, Stolle (2001, page 205) writes, is "trust of people who we do not know well." He further argues that this type of trust is built by membership associational groups in the community and other social interactions. Thus, he asserts that generalized trust is a necessary condition for social capital.

Trust is closely linked with social capital because trust is an interdependent, relational condition. Rousseau et al. (1998, page 395) describe this as a situation in which "the interests of one party cannot be achieved without reliance upon another." Since social capital deals with the gains that can be incurred from the interactions of two individuals, this concept overlaps with trust in many ways.

From reading about social capital and trust, two messages become apparent: trust develops social capital, while at the same time, social capital enhances trust. There is a lack of agreement in the literature whether there is a causal relationship between the two, or whether these are correlated concepts. And, as the definitions are often unclear, and sometimes convoluted, they could even be referring to the same phenomena. As Rousseau et al. (1998) point out, theorists can, and do, model trust as an independent variable (cause), dependent variable (effect), or an interaction variable (moderating condition).

3.10.4 Trust and Contracts/Transaction Costs

Nooteboom (2003) notes that a range of agreements, from contracts to informal, handshake agreements are used to enforce behaviours. In this perspective, trust is considered to be a type of contract substitute, to provide assurances in transactions. Also according to Nooteboom (2003) trust, unlike some 'harder' control mechanisms (by this, he means legal contracts), has positive side effects such as receptiveness, acceptance, and less need to impose control. Thus, trust has the potential to lead to more efficient outcomes in transactions. As Rousseau et al. (1998) note, it is not a control mechanism itself, but rather a substitute for control in the form of positive attitudes about another's motives.

Korczynski (2000, page 17) offers another interpretation, with respect to the benefits of trust in transaction cost economics. He writes that there is a downward spiralling nature of this low trust, perpetuating avoidance of undertaking transactions in the future, which can eventually lead to the harm of economic activity and growth. His views re-affirm the case of trust in transaction costs economics and contract economics. Trust can act as a substitute or as an alternative to some form of assurance in transactions, and can increase the amount of successfully completed transactions.

In the literature about trust and contracts, trust is seen as a commitment, or, according to Gambetta (1988, page 221) "a device whereby we can impose some restraint on ourselves and thus restrict the extent to which others have to worry about our trustworthiness." These commitments can also take the form of contracts or promises, for example, and serve the role of making the future outcomes of transactions more predictable and/or less risky. In this vein, Messick and Kramer (2003, page 91) view trust

as an aid in decision-making. More specifically, it is "making [a] decision as if the other person will abide by ordinary ethical rules." By ordinary ethical rules, I understood that they meant an expected set of moral standards and behaviours, imposed by norms in the community. In this sense, trust can be understood as having the capacity to partially substitute for formalized contracts. For example, the belief that one's trading partner is trustworthy could lower negotiation and concluding costs if one expects this trustworthy behaviour to indicate that they will live up to the promises made in the transaction. Negotiations might be less costly as well; less time and effort would be needed to put formalized contracts in place.

Rong Cai (2004, page, 22) suggests that trust plays two roles in transactions: "First, through norms and sanctions, trust may act as a substitute for the formal control system in governing transactions. Secondly, there is evidence that trust can facilitate the formation of ongoing networks governing economic transactions." The first role he mentions falls into place in the literature about trust and contracts. The second has to do with trust and social capital, discussed they can also be understood as an investment of time, capital and energy. He demonstrates here how the development and maintenance of trust can be costly, and how the investment will be lost if cooperation is destroyed. While the development and maintenance of trust does have a cost, it can be less costly than alternatives (ie. legal contracts); and so it is in this way that trust can be said to lower transaction costs. Trust building isn't costless; thus the presence of trust, or trustworthy behaviour can only be considered to lower transaction costs if the trust-building process itself is less costly than formal contracts. Rong Cai (2004) reasons that this is the cost of

trust that is one of the mechanisms by which to explain how trust is maintained in relationships.

As Williamson (1993) notes, opportunism and bounded rationality are key behavioural assumptions on which transaction cost economics relies. The presence of trust, or trustworthiness can influence behaviours by affecting both of these in turn; trust can curb harmful opportunism, and trust can help parties in transaction to overcome issues of bounded rationality with the notion of trust as a heuristic for making sense of human behaviour.

3.10.5 Trust and Reputation

This characterization of trust is based on confidence; it can be said that a person's ability to engage in exchange in the future is based, at least partially, by his lack of exploitation of current exchange. One manner in which an agent ensures trustworthiness is through the development of reputation. Dasgupta (1988) argues that trust is based on reputation, though it is clear from this chapter of trust that many trust theorists disagree with him. Trust and reputation are sometimes used interchangeably in the trust literature.

Reputation matters. As Rousseau et al. (1998) note, this is particularly true with a person's past trustworthiness. They also point out that it is the social context (networks) that allows reputation to have an effect in interactions. Korczynski (2000, page 17) also suggests that trust that is based on reputation is strongly linked to underlying incentive structures in on-going relations. He writes, "X is more likely to trust Y if reputation functions such that if Y defects, Y's reputation will be sullied, and hence Y's longer term interests will be harmed." Therefore, it is in the interest of the exchange partner not to defect, in order to continue to reap the long-term benefits from exchange in the future.

Cabral (2005) uses game theory to distinguish between the use of the concepts of trust and reputation in economic considerations. He makes a distinction between two mechanisms in the economic concepts of trust: bootstrap and Bayesian mechanisms. He interprets that bootstrap mechanisms can be termed 'trust', and Bayesian mechanisms can be termed 'reputation.' According to Cabral (2005, page 3), bootstrap mechanisms are based on repeated interactions, when "agents expect a particular agent *to do* something." Frequent repetition encourages mutual trust formation. This occurs through the creation of a Nash equilibrium, where the expectation of a longer time frame induces trustful behaviour, so as not to incur long-term loss from squandering trust. Here, trust is considered to be a gradual process, where trust between two agents is built over time. The second type of trust mechanism that Cabral (2005, page 3) identifies is the Bayesian mechanism; he explains that this consists of agents updating their beliefs, and occurs "when agents believe a particular agent *to be* something." He refers to this situation as a reputation mechanism. Typically, these models feature adverse selection and asymmetric information; thus reputation serves as a signal to the uninformed agents.

Ensminger (2001) differentiates between rational self-interest accounts of trust and knowledge-based trust. She distinguishes the rational self-interest of trust as sufficient knowledge about the other party's incentives to have confidence that they will fulfil behaviour you expect them to do. This conceptualization focuses on trust as risk-minimization. She explains that knowledge-based trust, on the other hand, is trust based on information that we have about the other party, including their reputation. She refers to this kind of trust as having more of a focus on uncertainty; since perfect information about the other person is not attainable, trust is used in conjunction with the information

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about the other party in order to assess whether or not to transact with them. Thus, trust can be seen as component of risk- and uncertainty-minimization in decision-making.

Finally, one particular aspect in the reputation and trust literature caught my eye in its potential relevance to the ALUS approach. This is the discrimination hypothesis. This suggests that agents choose transacting partners who are like themselves, based on reputation, knowledge or inferences about that partner. As I discussed earlier, part of the function of reputation is as a heuristic for choosing those people with whom one wants to transact with. Staub (1978) and Messick and Kramer (2003) write about the discrimination hypothesis, as one possible motivation for the choice of transaction partners. Staub (1978) noted that characteristics of people we trust include people that are familiar and similar, with whom we have frequent contact, and for whom we have a positive regard. Tyler (2001) suggests that social trust is more easily developed between people with a familiar background. He summarizes his reasoning as this person is more likely to share one's values, tastes, and generally, a sense of comfort of interacting with the familiar. Messick and Kramer (2003) identify factors such as frequency, similarity, familiarity, and affect as those that can elicit trust via empathic relations to the trustee.

3.10.6 Trust and Risk

Gambetta (1988) and Williamson (1993) make note of the 'elusive notion of trust' in social science literature; Williamson (1993) accredits the vagueness to the writers' interchangeable use of risk and trust. Risk and trust are not synonymous. It is possible that the confusion stems from another common conceptualization of the term. This definition involves a person's engagement in a transaction, because the agent believes that his/her partner will perform a beneficial future action. In other words, the agent

partakes in a risky transaction, with acknowledgement of the inherent risk, because of a belief of the partner's trustworthiness.

There seems to be an agreement among sociologists and economists that uncertainty, or some type of risk, is a key component in the development of trust. Rousseau et al. (1998, page 395) characterize risk in this sense, as "the perceived probability of loss, as interpreted by a decision maker." They further define the source of this risk as "uncertainty regarding whether the other intends to and will act appropriately." There is a reciprocal relationship between trust and risk. Risk at once creates an opportunity of trust, while at the same time, creates an environment in which risk-taking is more feasible. Coleman (1990) further notes that trust is re-enforced when the expected behaviour materializes in the future, which references the notion that there is a dynamic and virtuous cycle of trust.

3.10.7 Trust and Imperfect Information

Trust is also treated as a coping mechanism for dealing with imperfect information. Many scholars invoke ideas of bounded rationality in their discussions of trust. Good (1988, page 34) describes bounded rationality in the context of trust: "In everyday life there is a constant flow of events which requires numerous decisions to be made… One could spend hours analyzing the costs and benefits of each situation in order to derive the maximum benefits from it. However, time is valuable too." In this sense, trust is understood as a habit, or a heuristic upon which we rely to simplify the matter of every-day decision-making. It acts as a scheme, routinizing decisions so that we are able to make decisions without having to know or understand the particular and miniscule details. Messick and Kramer (2003, page 103) describe this process as the shallowness

hypothesis. "The kind of deliberation and thought required to make a decision is decided very quickly, not deep or systematic.... Humans [are] imperfect information processors and decision makers." Trust in this sense is therefore a heuristic process, a useful tool in problem solving and decision-making. Gambetta (1988, page 218) remarks that the conditions of ignorance or uncertainty about other people's behaviour are central to the concept of trust. He (Gambetta, 1988, page 218) notes that trust is "a way of coping with the limits of our foresight." He further attaches trust as a coping mechanism to the notion that people have a limit to their capacity of achieving full knowledge about other people, their motivations, and responses to changes in circumstances. Korczynski (2000) and Sabel (1992) say that the definition of trust, in this case, is similar to definitions offered in earlier sections; Korczynski (2000, page 4) defines it as the "confidence that the other party to an exchange will not exploit one's vulnerabilities." It is a belief that the other party will not defect, despite a lack of complete knowledge about their incentives or future actions.

Lorenz (1988, page 196) observes that economists have attached little significance to the role of trust in market exchanges. But, he accounts for this by noting that, under perfect competitive conditions, operators that contract together do not need to form continuing relationships, they are simply price-taking, identical product-selling, freely entering and exiting and perfectly informed agents. He writes that in the cases that consider imperfect markets/the real world, "this situation by its very nature calls for cooperation, and it is reasonable to ask whether trust plays a role in this process." Thus, the concept of trust can help explain human purposes and behaviours that violate the assumptions of neoclassical economics.

Imperfect information and trust are strongly connected to the reputation mechanisms discussed above. Good (1988, page 42), for example, draws attention to the cognitive operations underlying individual's perceptions of the social world. He says that considering this is important because "the interpretation of a reputation will be a function of the interpreter and, therefore, it is necessary to consider how new information is handled and is related to existing views." Thus, he insinuates that reputation is another way that social beings deal with imperfect information. Trust and imperfect information are also related to trust and contracts/transaction costs, discussed earlier. In the face of vulnerability, risk or uncertainty in transactions trust can aid in relieving the negative effects of these unknowns. Trust can be seen as a quasi-assurance that these adverse consequences will not present themselves.

3.10.8 Trust and Ethics

Trust is also considered from an ethical point of view. There have been a range of labels given to this form of trust, including ethical trust (Casson, 1991; Korczynski, 2000), trust as relating to inferences about the other party's motives (Yamagishi and Yamagishi, 1994) and sometimes naïve trust, and blind trust (Sabel, 1993). This type of trust does not assume that a tendency toward trustworthiness is necessarily in the interest of all individuals. However, knowledge about a person's motives and characteristics can indicate how trustworthy this person might be in transactions. Dunn (1988, page 73) for example discusses trust from a moral behaviour point of view; he writes: "Trust is both a human passion and a modality of human action… as a passion, a sentiment, it can be concerned with coping with uncertainty over time." He treats trust as an ethical

characteristic of a person. This type of trust is considered to be 'non-calculative'; the flaws in this assumption are discussed below.

Sako (1992) treats this type of trust as observable through ethical codes in society; she further posits that these ethical codes are required for a civil society to function. Thus, she treats trust as existing through societal norms. Korczynski (2000, page 14) writes of ethical trust, "the more agents act on social and ethical motives as well as economic motives, then the more likely they are to engage in trusting behaviour. Agents who act only on narrow economic motives will not develop trust based on personal relations." Here Korczynski (2000) is differentiating trust with the aforementioned 'calculative' (economic) and 'non-calculative' (ethical) types of trust in society, and suggests that both are necessary in a truly trustful relationship**.**

Ethical trust can also be referred to as 'blind trust.' This is a form of persistent trust, despite evidence that one's partner is might not be worthy of being entrusted. Sabel (1993) refers to this as 'blind loyalty,' and considers this type of trust as altruistic behaviour. I believe that this term is sometimes a misnomer; if we consider all decisions to be subjective, than we cannot claim that an individual's decision to trust in 'blind' or 'wrongly informed'. Each individual is afforded the right to make decisions based on their own interpretation of their information, and so if they continuously choose to trust someone, then it is not 'blind' or 'naïve'. This brings us back to the issue of 'calculated' vs. 'non-calculated' trust.

3.10.9 Calculative and Non-Calculative Trust

Many authors include their own categorization schemes for types of trust. A number of authors choose to compare different types of trust by contrasting 'calculative

trust' (Williamson, 1993) vs. 'blind trust' (Dasgupta, 1988), albeit usually with different nomenclatures given to each category. Dunn (1988) contrasts personal trust, which is a human passion with calculated trust, which is a modality of human action. Williamson (1993) describes personal trust (naïve trust) as 'nearly non-calculative'. Here, he is contrasting the calculated trust discussed in the game-theory section with naïve trust, discussed above. He (Williamson, 1993, page 479) points out that "if the decision to suppress calculativeness is itself purposive and calculative, then the true absence of calculativeness is rare if not nonexistent." Thus, Williamson (1993) differentiates between different types of trust based upon the degree to which an agent is making a calculated decision.

3.10.10 Sources of Trust

Luhmann (1988) writes of different mechanisms of asserting expectations. He lists three types: familiarity, confidence and trust. Luhmann (1988, page 95) distinguishes trust and familiarity: "familiarity is an unavoidable fact of life; trust is a solution for specific problems of risk." Though these two concepts are different, he maintains that trust is inherently related to familiarity, since, according to Luhmann (1988), its development is contingent upon familiar features in society. Distinguishing between trust and confidence, Luhmann (1988) notes the difference depends on a person's perception: when alternatives are not actually considered, one is encountering a situation of confidence. He writes that confidence involves the neglect of the possibility of disappointment of one's expectations. Trust, on the other hand implicates choosing with the possibility of being disappointed, and, Luhmann (1988, page 95) writes "presupposes

a situation of risk." It is its association with risk that differentiates trust form both familiarity and confidence.

Nooteboom (2003) identifies several sources of trust; these include: psychological sources (natural inclination to trust); experience (which can lead to routinized behaviour); cognitive sources (knowledge or inferences of a partner); affect based trust (loyalty, care, friendship, empathy, based on kinship); self-interested sources (including opportunity control and incentive control); and altruistic sources (including social norms, values and relationships). These sources can be further categorized as macro (institutional, thin) and micro (relationships, personalized) sources of trust.

In regards to macro sources of trust, Mackie (2001), citing Machiavelli (1519, republished 1970), for example, states that political institutions such as social trust are features of uncorrupted countries. Ariely (2008) connects trust to a nation's integrity. He characterizes trust as connected to honesty and integrity, which he views as building stones of trusting relationships. Pagden (1988, page 127), a historian, remarks that "although no central agency is capable of intentionally creating trust… it clearly does lie within their power… to destroy it." He (Pagden, 1988, page 127) defines the destroying of trust as: "spoil communication, to create distrust and suspicion, to make agreements un-enforceable, to undermine transition, to reduce solidarity, to discredit leadership." Although this literature review has focused mostly on micro sources of trust, macro sources of trust are capable of influencing personalized relations, and need not be neglected.

3.10.11 Trust as a Process

It is important to study trust as a process, because even though trust may be beneficial in transactions or relationships, this does not causally imply that trust or trustworthy behaviour will necessarily be developed between people. Nooteboom (2003) notes that there are stages of trust development; at the beginning, there are low-risk transactions, and then there is movement toward higher-risk transactions as trust develops. The low-risk transactions at the beginning stages lessens the need for extensive contracts to be formed, that would otherwise mitigate against opportunism. Nooteboom (2003) also writes that joint solutions to problems deepens trust between people, and that honesty is crucial in trust development over time. In the study of trust as a process, some authors such as Zeitlin (1992), note that trust can appear to be a consequence as well as than a condition to cooperation among actors. Also in the discussion of trust as a process, there is the notion of trust as a spiralling reinforcement concept. The idea here is that the presence of trust can encourage the persistence and further development of trust, while the breakdown of trust encourages the opposite downward spiralling effect. Brann and Foddy (1988) point out that people are more likely to respond to trust than they are to initiate it. Baron et al, 2000 also note that trust tends to evoke trust, distrust tends to evoke distrust.

There are scholars who have treated trust as static; this treatment can fall out of an assumption of equilibrium seeking. Trust is sometimes treated this way in the economics literature. Much of the trust research within game theory, for example, focuses on highly structured games, and trust is studied at a particular point in the game. However, in human relationships, Rousseau et al. (1998, page 395) note, "trust changes over time – developing, building, declining, and even resurfacing in longstanding relationships."

They (Rousseau et al., 1998) identify three phases of trust development: building, stability, and dissolution. Though it is not always considered so in academic writings, the development of trust is a process that requires time and learning.

3.10.12 Trust in Institutions

Several authors, including many sociologists, write about a form of trust that is determined by institutions. Giddens (1990) writes about trust in formal societal structures and symbolic tokens; Zucker (1996) and Lane and Bachmann (1996) write about trust in associations as a form of institutional trust; and Luchmann (1979) writes about system trust in advanced societies. Williamson (1993, page 486) defines institutional trust as the "social and organizational context within which contracts are embedded… transactions are always organized (governed) with reference to the institutional context (environment) of which they are a part." Rong Cai (2004, page 11) adds to this characterization, in noting that "organizations are inherently contained within their institutional environment including laws, rules, and norms. This can facilitate trust through 'social regulations'." In this sense, trust can be a characteristic that is expressed by people based on the institutions by which they are governed. In this categorization, trust is understood as an effect of institutional arrangements. For example, Rousseau et al. (1998) write that trust can be the result of identity formation, or from third-party accounts of another's trustworthiness (reputation).

3.10.13 Concluding Observations about an Integration of Trust Between Disciplines

As I have observed throughout this chapter, it is difficult to generalize scholars' views of trust within disciplines, because within each of economics and sociology, there are a plurality of views on the topic. Thus, coming up with an integration of this

piecemeal topic between disciplines was a difficult task. If I were to generalize, economists tend to discuss trust in the context of transactions. It is most often related to an actor's reputation, and trustworthiness. Trust can be seen as a factor considered when exchanges are being made. In sociology, reputation is also a consideration, but there are many more aspects to trust, as has been discussed above. In sociology, trust is also tied closely with the idea of confidence, and includes both observable and non-observable components within an individual. Trust, in sociological literature, is also considered to be motivated by a number of different factors, including morals and societal norms.

A similarity about trust between disciplines is the idea that trust enables cooperation between individuals and within society. It is also generally agreed between disciplines that trust and cooperation can bring about positive, and more effective outcomes. In both sociology and economics, trust and social capital enable a scholar to add more depth and socially-motivated variables to their research. Other themes and topics became apparent as my research unfolded; it became pertinent to add to theories and definitions of these topics in literature review, so as to better analyze and interpret them in Chapter 8: Results and Discussion. These themes were**:** Participatory Processes, Community Capacity, and PEGS Program Objectives. Each is described in turn.

3.11 Participatory Processes

Participatory processes are borne from the notion that key information, required for the design and implementation of programs, resides within the minds of individuals for whom these programs are designed. Including these stakeholders in the design and implementation process can result in a more meaningful and appropriate program. Sybille

van den Hove (2006, page 10) defines participatory processes as "institutional settings where stakeholders of different types are brought together to participate more or less directly, and more or less formally, in some stage of the decision-making process." He notes that stakeholders' involvement in program conceptualization has enhanced information sharing and feedback mechanisms among its merits. In participatory processes, stakeholders are participants in decision-making, so as to achieve more palatable options for the community for whom these decisions have implications.

3.11.1 Who to Include?

The term 'stakeholder' is wrought with difficulties; anyone who decides that they care about an issue can claim that they have 'stake' in the decision making process. For organizations utilizing participatory processes, it is important to delineate which people ought to have a claim to the decision-making processes. Hove (2006, page 16) notes that participatory processes are important for both functional reasons, in terms of making more effective and accountable decisions, and to further sustainable development, in terms of involving the stakeholders in the organizational processes to maintain relevance to those involved. As Kapoor (2001, page 270) writes, "truth, fact and cause-effect are not revealed through the single lens of the outside 'expert' but constructed inter-subjectively through the multiple perspectives of all relevant programme participants or 'stakeholders.'" The identification and inclusion of the right stakeholders is key for participatory processes. One way that this can be done is through stakeholder analysis[4]. This evaluation attempts to determine various actors' relevance to a policy or program.

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[4] For more information about stakeholder analysis and mapping, refer to Newcombe (2003), who discusses the application of stakeholder mapping to project managers; Grimble and Chan (2009), who write out the principles of stakeholder analysis; and Brugha and Varvasovszky (2000) who review the origins and uses of stakeholder analysis.

As Brugha and Varvasovszky (2000, page 239) explain, in carrying out the analysis, questions are asked about the position, interest, influence, interrelations, networks and other characteristics of stakeholders." Thus, stakeholder analysis can help clarify who ought to be a legitimate stakeholder. Walker et al. (2002, page 18) clarify which types of people should be included in these participatory approaches for ecosystem management: "identifying the group requires knowledge of the institutional framework that determines the rules for ecosystem use, with particular reference to property or usage rights and the locus of decisions." This implies that participatory programming needs to acknowledge the existing distribution of control and power over decision-making within the community, and work within the existing structure in order to attain legitimacy. Organizations that wish to make use of participatory processes can define these stakeholders within their Terms of Reference of their stakeholder committees. These will often include a rationale for why each group of individuals ought to be included in the decision-making processes that define the principles and actions of the given organization. The following section explains what Hove (2006) describes as key elements that guide participatory practises.

3.11.2 Implementation of Participatory Processes

Hove (2006) suggests the following four idealized elements in guiding participatory practises. The first requirement, Hove (2006, page 12) writes is "a free speech situation, which is (as much as possible) devoid of external constraint and of strategic behaviour, accessible to all, and in which only the unforced force of the best argument counts." This can put participating farmers more at ease to speak their minds, and put forth suggestions without guarding their thoughts and opinions. Second, Hove

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(2006, page 12) suggests "a consistency between discourse and beliefs, as well as consistency between discourse and behaviour." This speaks to the idea that participants in the participatory processes should be held accountable, for example, offering justifications for arguments, and acting consistently in terms of their words. The third requirement is transparency; Hove (2006, page 12) writes "each participant's references and values should be made explicit and the standpoint from which he perceives his interest should be open to others' critique." Finally, Hove (2006, page 12) writes that the fourth requirement is "a focus on common interest: participants should strive to address a common interest beyond the mere adjustment of particular interests." This can be achieved by having participants in the meeting come from various backgrounds, with a different stake in the PEGS approach.

Hove (2006, page 14) writes that with the implementation of these four guidelines, "the overall quality and effectiveness of participatory processes, in terms of creatively addressing and resolving environmental issues, ensuring (some degree of) fairness, handling pre-existing or emerging conflicts, and avoiding manipulation, are likely to improve." Patten (2001, page 226) adds that in implementing participatory processes, consultation should occur throughout all stages, including agenda setting, guideline and agenda formation, and program implementation.

3.11.3 Application to Natural Resource Management

Plummer (2002, page 41) and Decker et al (1996) have noted that natural resource management inherently has an emphasis on managing people, who are responsible for managing the resources themselves. Ultimately, the management of the resources depend upon responses to a host of various interests, values, and institutional rules that are

imposed upon individuals. According to Walker et al. (2002, page 14), participatory processes are particularly suited for natural resource management. Walker et al. (2002, page 14) explain with natural resource management, the manager ought to be considered within the system being managed. Environmental services are contained within the farmer's jurisdiction, upon their privately owned land. Any decisions made to enhance or increase the amount of EG&S provided from this private land are ultimately made by the landowner, or by virtue of regulations imposed on the landowner. If the objective of natural resource management is long-term sustainability, then the managers (or in this case, landowners) need to be considered as integral components within the system. Hove (2006, page 10) also notes that participatory processes are appropriate for situations having to do with resource management and environmental initiatives. He writes, "participatory approaches have been increasingly advocated as effective decision-making processes to address complex environment and sustainable development issues." Grumbine (1994) agrees that environmental management is particularly complex, because "ecosystem management integrates scientific knowledge of ecological relationships within a complex socio-political and values framework toward the general goal of protecting native ecosystem integrity over the long-term." Highlighted below are some exemplifications of the complexities of natural resource management, and how these relate to the implication for participatory processes.

Hove (2006, page 11) notes that there are 'societal characteristics' of environmental issues. He lists these characteristics as: "societal complexity and conflicts of interests, tranversality, diffused responsibilities and impacts, no clear division between micro- and macro-levels, and short-term costs associated with potential long-term

benefits." He claims that the combination of societal complexities, in combination with physical complexities of environmental phenomena results in uncertainties social-ecological systems with respect to both predicting outcomes, and creating policies to address these socio-ecological realities. These environmental and societal characteristics help to define the type of analytic tools that are most appropriate for management and problem solving within natural resource management. Increasing a system's resilience, as Walker et al (2002, page 14) write, involves "maintaining the functionality of a system when it is perturbed, or maintaining the elements needed to renew or reorganize if a large perturbation radically alters structure and function." The way in which participatory processes can build a system's resilience is that by engaging land managers in participatory processes, when there are activities and tasks that need to be performed, the person who is most apt and able to get these tasks completed is simultaneously the person responsible for doing them. Through participatory processes, the landowner is engaged in the process, and is part of the solution, while the program itself remains flexible, and thus suited to adapt to externally-driven changes.

Considering an economic perspective, participatory processes can be legitimized for a number of reasons. I have highlighted a couple of these reasons below, as informed by Walker et al. (2002).

First, there are few markets that exist for EG&S in Canada; thus, prices of EG&S cannot currently assist in signalling their value, nor the amount, type or quality of EG&S that Canadians desire. While participatory processes are not the antidote to this, they are a means to bringing the decision-making closer to those people who would be the sellers of EG&S, to assist with market development.

Second, landowners make land-use decisions based on imperfect knowledge, and with limited resources. These decisions are not made purely upon the consumption of goods and services; instead, a farmer's utility maximization depends upon their social context. Moreover, these preferences might not just be held over outcomes; these preferences could include, as Walker et al. (2002, page 16) observe, "the social, economic and political processes that govern those outcomes." While individuals are boundedly rational (Jones, 1999, page 297) the models that policy-makers might use to represent their behaviour cannot be rich enough so as to include all of the variables upon-which land-use decisions are made. As Walker et al. (2002, page 16) write, "probability distributions for key decision variables are highly uncertain; both the functional form and parameters of distributions may be unknown… moreover, the key parameters may change faster than we can update information." Participatory processes can address this information gap by putting those landowners, who are ultimately making the land-use decisions, in charge of what the program ought and ought not to include. As O'Connor and Cooper (2005, page 1) write, "the process creates an environment in which professional and experiential knowledge of participants can emerge to inform the meeting's agenda and coalesce to produce rich and creative outputs." Landowners can voice their preferences at each committee meeting, bringing the important decision-making variables into the structure and implementation of the program itself.

Kapoor (2001, page 276) adds that there are other important factors that are necessary for effective participatory practises, including property ownership regimes whereby suppliers of EG&S have entrenched rights to the resources on their lands. Choosing the right stakeholders, within workable institutions, affects the impact and

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relevance of a PEGS program. However, the idealized conditions for participatory processes to be manifested, do not always exist. This leads to the criticisms, and limitations of the notions of participatory processes.

3.11.4 Limitations of Participatory Processes

There have been several criticisms and limitations with respect to participatory processes that were brought up in the literature, as well as a few that I conceptualized in the consideration of participatory processes.

First, there are issues of capture. There is no specific manner in which to ensure that individuals who have a legitimate stake in a project or program will necessary also have the enthusiasm and time to carry out the responsibilities that are associated with participatory processes. Second, there are limitations of scale. As Plummer (2002) points out, participatory processes are inherently local in nature. He points to ecosystem management as potentially requiring coordination or linkages between localities, or a systems-perspective in order to have tangible effects. Third, there can be strategic behaviour on the part of the stakeholders. As Hove (2006, page 13) points out, it is difficult, sometimes impossible, for actors to completely set aside personal interests and focus solely on interests of the group. Moreover, finding a common interest is not necessarily a tangible outcome. Stakeholders will have value standpoints and opinions that might not be able to be reconciled. In order for participatory processes to progress, some kind of consensus or compromise situation must be met, but this can be a difficult goal to achieve. Relatedly, strategic behaviour can manifest itself within participatory processes. For example, an actor could keep certain information or conflicts of interests hidden to engender manipulation of the process later on. Finally, it is possible that even if

a broad spectrum of stakeholders are included in the process, there could be the issue of ignorance-sharing. That is, the motivation for one particular individual to garner the necessary knowledge and speciality to problem-solve may not be direct, as solutions are the responsibility of the group as a whole. Thus, if there is the absence of required information, the group's individuals re-enforce the sharing of existing knowledge, but they might miss a key element. These limitations are not necessarily present in all organizations that implement participatory process; they exemplify concerns and possible issues that could arise.

3.12 Community Capacity

The participatory processes section above considered the role of the community in setting its own agenda for program development, and being the agents who guide the implementation of the program itself. Community capacity, in the sense to which I am appealing, considers resources in the community that are assets in program implementation. The following section explains what is community capacity, why it is important, and how a program can build upon it.

3.12.1 What is Community Capacity?

McKnight and Kretzmann (1996, page 3) define community capacity as the ability of the people in a community to organize and/or transform their assets and resources to achieve their desired objectives. Chaskin (2001, page 293) remarks that definitions in the literature are in agreement about four elements of community capacity, which are: 1- the existence of resources, from individual skills to financial capital; 2- networks of relationships; 3- leadership; and 4- support for mechanisms or processes of

participation by community members in collective action and problem solving. Community capacity can operate through channels of informal social processes and/or organized effort. It is related to other themes that I have discussed so far; it is related to participatory processes, as Chaskin (2001, page 292) points out, community capacity models emphasize "the centrality of meaningful resident participation in the change process and the importance of developing their human and social capital as a condition for sustainable community change." It is also related to social capital, in that it emphasizes factors that a community needs to enhance its resilience, including social elements such as relationships. Robison and Ritchie (2010, page 27) note, "we routinely use social capital to motivate the substitution of one capital form for another." By this, they suggest that one can call upon their existing social capital, rather than go out and purchase commercially provided capital to satisfy particular demands. For example, one could borrow a friend's truck and hands to move, rather than hiring a moving truck. Community capacity is understood to be both an input (a means to successfully implementing a PEGS program) and an outcome (strengthening the means of individuals, families, social networks, organizations, communities, etc).

Community capacity involves the development of policies, programs and activities that build upon the skills and assets of the people in the community in which the program is directed. Community capacity is process oriented, rather than focused on outcomes. It is an approach that views reality as socially constructed and culturally specific.

McKnight and Kretzmann (1996, page 3) contrasted a capacity focused model of program design/analysis with a deficiency-oriented model. The consensus in community

capacity literature (for example, Gibbon et al. 2002, McKnight and Kretzmann, 1996) is that the former builds upon existing community assets to address community concerns, and embodies a dynamic understanding of human and social resources; the latter identifies and maps needs in the community, and focuses on risk identification, deficit reduction and categorical provision.

There have been criticisms of community capacity analysis in the literature. Kapoor (2001, page 275) details a few of these, including the idea of the community being romanticized, assuming that members are naturally inclined, and willing to assist toward whatever the program's objectives may be. He also argued that the literature tends to suggest that community members are monolithic, or tending toward similar interests and characteristics, when in fact people within a community may be dissonant, or having multiple and sometimes divided and conflicting interests.

While these are important points to acknowledge, I do not believe that they take away from the strength of community capacity analysis. I disagree with the first point made, in that if you consider both participatory processes and community capacity, one does not have to make the assumption that community members are 'naturally inclined' to a program's objectives; instead, they tailor them to the needs of the community. Also, sustainable programs would acknowledge the multi-dimensional nature of communities, and seek to create working processes rather than singular, permanent approaches to programming.

3.12.2 Why Community Capacity is Important

Community capacity has applied implications on program development. Newly developing pilot projects can be both a large time commitment, as well as a heavy

resource commitment. Because of these costs, it can become pertinent to draw on existing

community infrastructure to fill in any programmatic gaps. Kapoor (2001, page 274) adds

the community capacity can also be important because of institutional reticence. A PEGS

program may require changes in organizational culture, with a movement to more

flexible goals and procedures, and the establishment of appropriate legal frameworks.

These changes may or may not be supported by bureaucrats and political will (and, as

Kapoor (2001, page 274) points out, bureaucrats may have little incentive to promote

these new practises, because of a loss in their discretionary power. Andrew Graham

(Ontario Soil and Crop Improvement Association program director; Personal

communication, March 1, 2010) speaks to the importance of political will in receiving

government support and funding for a PEGS approach. He notes, "if there is political

will, and interest by the farm organizations around a permanent cover type program,

where in addition to establishment costs, there is greater concern over opportunity cost,

the cost of production that is associated in the years following establishment, that's where

a permanent cover type approach, a conservation tender type approach, and ALUS type

approach may have merit. But in the last 15 years, we haven't seen strong government

support to go into that type of program." Pilot programs need not be government-

initiated. But in order for these programs to be sustainable, they need to have access to a

consistent set of resources that they can draw upon to ensure the smooth and stable

continuation of programming. Kapoor (2001, page 274) calls this process the

systematization of environmental management.

Community capacity is especially important to consider in the formative stages of

a program; and it is an issue that seems to be on the forefront of the minds of many of the

interview and focus group participants in my case study. Considering community capacity at the early stages of the development of a PEGS program can reflect on their preparedness to address issues that may arise in the pilot, and in the future of the program.

Capacity building is an essential part of a strategy for sustainable programming, because, as Wendel et al. (2009, page 279) write, "organization infrastructure and the community commitment for continuation are created in the process." Should publicly supported initiatives on PEGS programs become less available, then we would have reason to believe that these types of programs will need to reply more heavily on farmers sustaining programs in their communities, building upon social and physical assets that are already in existence.

3.13 PEGS Program Objectives

The appreciation of program simplicity was a theme repeated throughout my data collection. Program recipients, organizers and observers recognized the significance of keeping a program as simple and user-friendly as possible. This was seen to be a way to reduce barriers to participation. One key way in which a PEGS program can communicate simply is by being clear about its program objective(s).

Different PEGS program objectives, result in different program design implications, as well as different measures of program success. Different program designs follow from whichever objective in which PEGS programs place their emphasis. A PEGS program operates within a set of distribution rules for payments, which speaks to what they determine is a legitimate way of designing and implementing their

programming. Table 3.2 highlights some of the ways in which different emphasis on

program objectives result in differently structured PEGS programs.

Table 3.2: Types of PEGS Programs, According to their Payment Instrument and Design Implications

PEGS Program Design: Type of Payment	Explanation of Payment	PEGS Design Implication
Compensation	Payments should compensate landholders for the foregone benefits related to the provision of environmental services	Payments are differentiated according to the cost of provision
Common goods	Payments should be invested in common goods, so all providers benefit indirectly and according to their relative use of the common goods in question	Payments are not differentiated, no direct payment
Egalitarian	Design should contribute the fund equally among all the providers (per unit of land area, for example), independently of the level and cost of environmental service provision	Payments are not differentiated
Maxi-min	Payments aim to maximise the net benefit to the poorest landholders, even at a cost of efficiency loss	Payments are differentiated, according to the income of providers
Actual provision	The allocation of funds among landowners corresponds to the actual outcome level of provision of environmental services	Payments are differentiated according to the actual provision of the service
Expected provision	Payments to the landholders depend on the expected level of provision of services for a given land use.	Payments are differentiated according to the expected provision of environmental services. Payments compensate landholders to the particular land use changes or practises expected to enhance the provision of environmental services
Status quo	Payments should maintain the previous level of relative distribution of income among providers	Payments are differentiated according to its impact on income inequality.

Note: Table adopted from Pascual et al., 2010, page 1240

Each of the PEGS program designs displayed in Table 3.2 has different relative emphasis given to either efficiency or equity objectives. Pascual et al. (2010, page 1240) explains that the program objectives, and the inherent rules of conduct, depend on the institutional setting, technical aspects, power relations and practical considerations.

Pascual et al. (2010, page 1237) notes that while delivering efficient ecosystem service outcomes is seen as the guiding principle in PEGS literature, equity issues are an important aspect that practitioners ought to take into account when designing PEGS programs. Having a sole focus on efficiency would not necessarily build the community capacity on which a PEGS program relies; since there would almost certainly be less participants, this could preclude much of the social capital and capacity-building that a PEGS approach has the potential to take advantage of. Moreover, demonstrating that the efficiency objective is being met through the PEGS program might prove to be quite challenging; the relationships between land-use change and the provision of EG&S is, as Pascual et al. (2010, page 1238) writes, "often context-dependent and hard to demonstrate." Scientific knowledge about these ecological processes is certainly not conclusive, and can be very difficult to measure. Pascual et al (2010, page 1238) write that "the interdependency between efficiency and equity effects should be considered as a key feature of PES schemes." Pascual et al. believe that this will bring PEGS theory and practise closer together.

Another conflict that can arise in agricultural-environmental program objectives is that of different views of environmentalism. Free market environmentalists would argue that a PEGS program ought to focus solely on getting the price right, so to speak (Lynne, 2001 page 3). Anderson and Leal (1991, page 3) write, "at the heart of free market

environmentalism is a system of well-specified property rights to natural resources."

Thus, EG&S are to come from private lands, with well-defined property rights, and they are best accounted for through market instruments. A significantly different view, such as that of Hackett (1998), and Daly and Cobb (1990) would argue that community and the strengthening of environmentally conscientious norms would best serve the ecological system. A PEGS program that tried to respond to both of these objectives and views would certainly run into implementation conflict. Lynne (2001, page 3) labels this conflict a "bipolar environmental policy." He adds that these two views are not reconcilable, and so conflict and tension are seen in environmental policy forums.

3.14 Conclusion

One conclusion that I draw from this literature review, is although there may be many different categories of trust and notions of social capital, the conclusions drawn in the research often overlap and compliment findings from other papers, regardless of disciplinary confines. This literature review integrated insights from both economics and sociology by commenting on general similarities and differences between disciplines, and delineating these concepts within categories of social capital and trust that frequently appear in the literature, which included a description of the sources and consequences of social capital; the meanings of norms, networks and trust as they are discussed within a social capital paradigm; the concept of social capital and the role of the broker; and trust was analyzed from various perspectives, including trust within game theory, as a good or commodity, as social capital, trust and contracts/transaction costs, reputation, risk, imperfect information, ethics, calculative and non-calculative trust, sources of trust, trust as a process, and trust in institutions. I also discussed the strengths and limitations of

these concepts throughout this literature review. Some of the main limitations of trust and social capital included a lack of consensus on basic definitions of trust and social capital within and between disciplines, the fact that definitions of social capital are often quite circular, and arguably over-used and over-applied to a broad range of social issues which can result in a less meaningful concept, as well as the difficulties of measuring and assessing these concepts. On the other hand, the main strengths of trust and social capital were the fact that these concepts can allow for more complex and realistic modelling in policy making, that these can be used as a vehicle through which focus can be placed on the quality of relationships between people, and they are useful concepts through which to bring together ideas of sociology and economics. As this thesis went on, I found the need to add to my literature review, as important themes emerged as key to my research. These themes included: participatory processes; community capacity and PEGS program objectives.

Insights from social capital and trust literature informed the way I incorporated these themes into my conceptual framework, I considered them to be a factor that might encourage participation in a PEGS program. I contextualized the way in which trust could be considered a critical success factors for achieving participation in a PEGS approach with a decision-making model. My conceptual framework is presented in the following chapter.

Chapter 4 - Conceptual Framework

A Participation Model for a Payment for Ecological Goods and Services Program

4.1 Introduction

This chapter details my conceptual framework, as well as an interpretation of the effect of social capital and trust with a supply and demand schematic. Figure 4.1 is my original conceptual framework, depicting an individual's participation process in the ALUS program. It was created after conducting the literature review, but before commencing data collection. It contains the factors that might encourage and discourage participation in a Payments for Ecological Goods and Services (PEGS) program identified in the literature, and contextualizes the way in which trust can be considered a critical success factor for achieving participation in a PEGS approach.

4.2 Conceptual Framework: First Stage, Figure 4.1

The goods/services being considered in this case are environmental goods and services (EG&S), delivered from farmlands. At the left and right sides of Figure 4.1, there are buyers and sellers. The sellers in this model are famers, and while they have the capacity to provide ecological functions on their farm without receiving compensation, this model considers those cases where they formally provide EG&S through a PEGS program. There are a variety of motivations for why farmers might provide EG&S on their farm, through a program like ALUS. These include monetary reasons (receiving payments for providing these EG&S); moral reasons (a natural stewardship ethic,

contributing to the environmental integrity of their region); and social capital motivations

(norms and networks, social pressure to provide EG&S).

Figure 4.1: Conceptual Framework of the Participation Process in a PEGS

Program
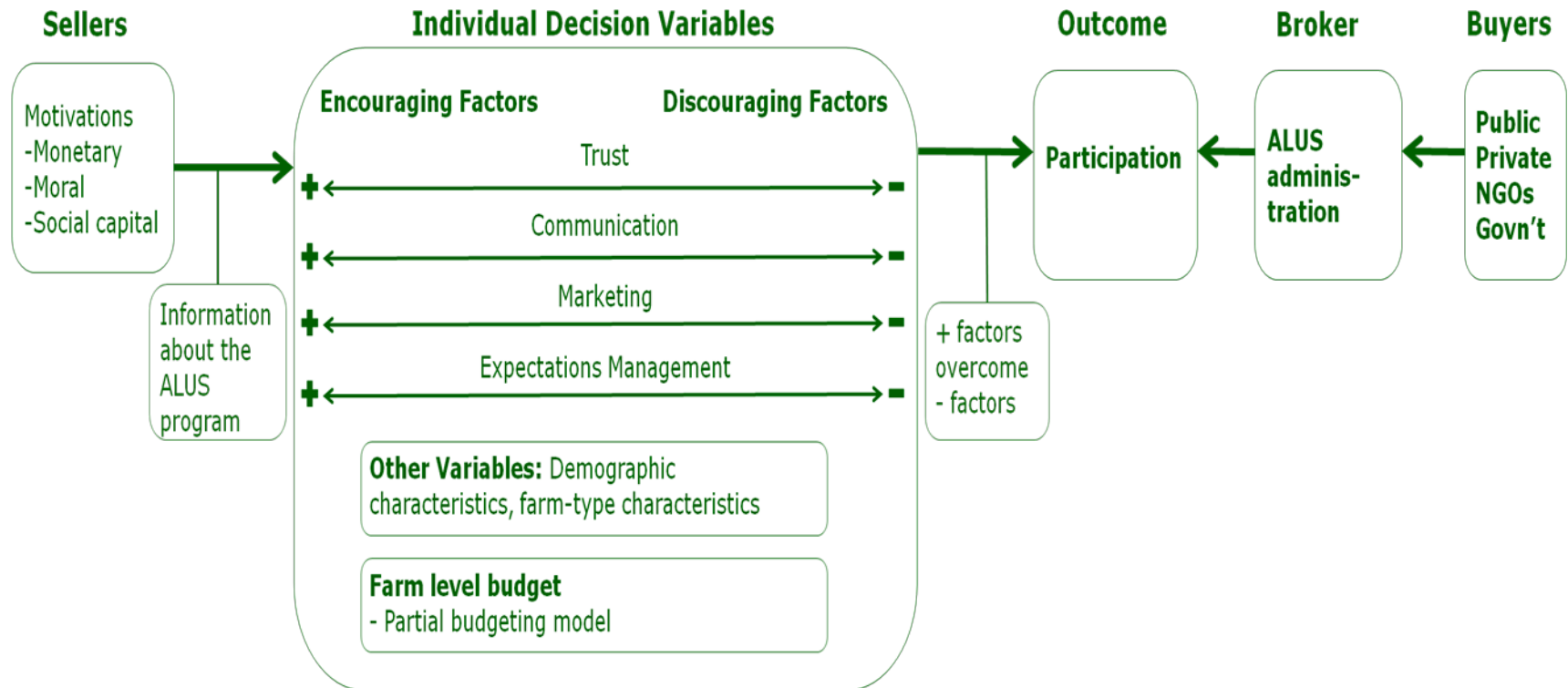
The arrow that connects the sellers to the individual decision variables is one of communication of information. The farmers need to know about the ALUS project before they can consider whether or not they will participate. This arrow has to do with program marketing, and how communication is executed between program organizers and farmers.

Once farmers are driven to provide EG&S through a PEGS program, and they are informed about the ALUS program, they consider a number of variables in order to make the decision of whether or not to participate in the ALUS program. Within these individual decision variables, there are factors that could either encourage or discourage farmers to participate in the ALUS program, as is demonstrated by the sliding scale of each of the factors within the individual decision variables in Figure 4.1. Not all farmers would consider each of these variables; and those that encourage one farmer might not encourage their neighbour. I hypothesized that variables that might encourage farmers to participate include: Trust in the organizing agency and its administrative members, good communication, expectations management, good marketing, farm-type characteristics and demographic characteristics. My conceptual framework suggests that those same factors might discourage farmers from participating in a PEGS approach , only these variables would work in the opposite direction. For example, a lack of trust in the brokering agency and its administration would dissuade a farmer from participating in a PEGS approach.

One of my research purposes is to examine what are the critical success factors for the implementation of PEGS programming, and as my proposition states, I am hypothesizing that trust is a critical success factor for the participation in PEGS programs by farmers. Trust can take many forms, but in this case, it is generally the belief of positive expectations of the future behaviours of ALUS administrators. Specifically, this can include accessible assistance on the

farm, open communication with ALUS coordinator, expectations of positive interactions with ALUS community, etc.

There are other variables that might encourage or discourage a farmer from participating in a PEGS program. There are demographic and farm-type variables, which might make a PEGS program more or less attractive to farmers with differing farm and personal characteristics. There has been much agricultural extension research done to determine which farm-type and demographic characteristics of a farmer makes them predisposed to provide EG&S from their farmlands; this factor was not considered in depth in this research, however it is acknowledged as a variable in my conceptual framework of the participation in PEGS approaches. Also, an individual budgeting model is considered as an individual decision factor. This is because the participation in a PEGS approach can either increase or decrease on-farm costs and revenues. If the overall balance of the budgeting model returns a profit, then the budgeting variable would be considered a persuasion factor. Profit losses would be considered to be a resistance variable. One method of determining whether participating in a PEGS approach results in profit gains or losses is a partial budgeting model. A partial budgeting model is a framework that allows farm managers to analyze alternatives in their decision-making in a methodical manner. Roth and Hyde (2002, page 2) describe the model as a "planning and decision-making framework used to compare the costs and benefits of alternatives faced by a farm business." The way that these costs are compared is through a focus on the positive and negatives changes to incomes and expenses that would result from the implementation of an alternative decision, such as implementing a PEGS on the farmland. A partial budgeting model is a suitable approach for the individual decision factors in my conceptual framework as focuses on how the decision to participate will affect the profitability of the farm.

For each individual farmer, any number of the abovementioned variables could be present if they are deciding whether to participate in the ALUS program. I am hypothesizing that the decision to ultimately participate or not is dependent upon whether these variables balance to produce an overall encouraging influence, or whether the discouraging factors weigh stronger. The arrow that connects individual decision variables to the outcome of participation denotes the case where the encouraging factors are stronger than the discouraging factors.

The outcome then, as we travel from left to right along Figure 4.1, would be the participation in the ALUS approach. This is, however, only the first of two stages in achieving a hypothetical desired end of an optimal level of provision of EG&S from farmlands. The first stage can be explained as the decision of whether to participate, or not.

4.3 Conceptual Framework: Second Stage, Figure 4.2

Once the decision has been made to adopt the ALUS approach, this farmer enters the second stage of the decision model. The second stage of participation is depicted in Figure 4.2. This figure is very similar to Figure 4.1, except that it differs in outcome. The outcome of the second stage of this model would be reaching some optimal quantity and quality of EG&S delivered from the farm. After the farmer initially decides to participate in the ALUS program, there is a negotiation process whereupon the amount and type of EG&S that will be delivered from their farmland is decided. The decision of whether a farmer will provide a large or small quantity of EG&S, and whether it is highly productive EG&S, or provision of lower quality EG&S is reached in the initial negotiation process with the ALUS organizers.

Figure 4.2: Conceptual Framework of the Participation Process in a PEGS Program – Contract Renewal Negotiation
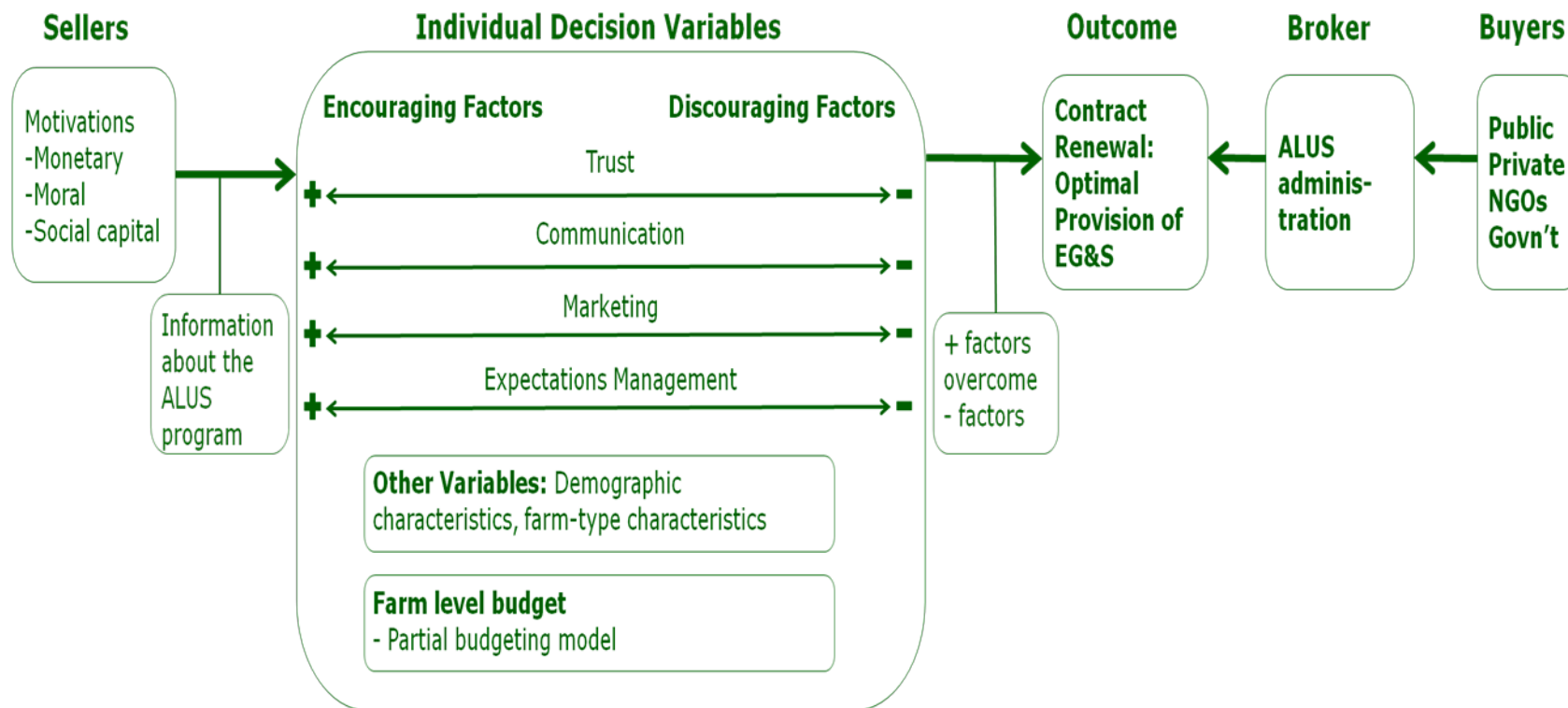
After a given amount of time (at the present, ALUS contracts are 3 years long), if the ALUS program continues into the foreseeable future, the farmer has the option of re-signing the contract. The amount and quality of EG&S provided from farmlands can be altered at each negotiation period. In sum: the first stage is about whether the farmer decides to participate or not to participate; the second stage is about reaching a more optimal quality and quantity of EG&S delivered through a negotiation process between the farmers and ALUS organizers.

This conceptual framework can be understood as a transaction between two parties: at the far left there are the sellers of EG&S, the farmers. To the right, there are the buyers of EG&S. In the case of the ALUS pilot, funding comes from many different sources. Funding sources include: NGOs, such as Delta Waterfowl, National Wild Turkey Federation, Ontario Federation of Hunters and Anglers, government grants, private organizations, individuals in the public etc. Essentially, the buyers represent those groups and individuals who are paying for the delivery of EG&S. The ALUS program connects these funds to the farmers who are participating in their program. ALUS functions as an intermediary between the buyers and the sellers in negotiating agreement of the provision of EG&S in return for payments.

4.4 Effect of Social Capital and Trust: Supply and Demand

The way in which social capital and trust affect the quantity and quality of supply in demand, as hypothesized in my conceptual framework, can be further explained using an economic perspective, and supply and demand graphs. Robison and Ritchie (2010) explain that the inclusion of social capital in market exchange results in a shift of the supply curve to the right, as well as a shift in the demand curve to the right. This is because with each unit of good sold/received, there is also a quantity of socio-emotional goods that are exchanged. When considering the inclusion of socio-emotional goods, the seller would be willing to offer the same

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amount of goods at a lower price, while a buyer would be willing to buy the same amount of goods at a higher price. In this explanation, both these curves shift simultaneously, which results in a higher quantity of goods exchanged (Q → Q*), while the effect on price is indeterminate.

The inclusion of social capital in exchange can be applied to the supply of EG&S at the farm level, which I've exemplified using the ALUS program in Norfolk County. Figure 4.3 shows the provision of EG&S from farmland at an individual level. This supply/demand graph is unusual, in the sense that it incorporates transaction costs. Fox (2008, page 125) citing Coase (1960) defined transaction costs as "the value of the resources used up in making a market exchange." The inclusion of transaction costs in this conceptual modelling is important, as social capital affects exchanges by decreasing transaction costs. The following three graphs show this in a step-by-step manner.

Figure 4.3: Supply and Demand of EG&S on a Farm Before ALUS is Introduced

Note: No market exchange would occur. While farmers might provide ecological benefits on their farm, they are not paid to do so.

Figure 4.3 shows the time before a farmer has considered the ALUS program. The individual would not supply EG&S from his or her farmland through a payment for services program. His supply curve does not intersect with the demand for EG&S. The demand curve for EG&S represents the sum of the groups and individuals who are interested in funding the ALUS program. Since the supply and the demand do not meet, the individual would not receive compensation for supplying EG&S, and so there is no transaction.

Figure 4.4 represents the situation when a farmer decides to participate in ALUS. Three additional aspects have been added to the original scenario. First, ALUS has come in to act as a broker between the suppliers (farmers) and the demanders (public, NGOs, private firms). The price line, P, at $150 represents the per acre price paid to farmers who are enrolled in the ALUS pilot project in Norfolk County. This does not vary from farmer to farmer (except under unique circumstances). This price line determines the quantity supplied, as the farmers are responding to program demand, and the price that is paid to them on a per/acre basis. A broker is an individual or organization that mediates between the buyer and seller, in this case between farmers and funders. Pascual et al. (2010, 1242) remark about brokerage, "a very key role of the intermediary is to coordinate actions between stakeholders and deal with the asymmetric information[5] between stakeholders in the design and implementation stage of any [PEGS] scheme." For more information about brokers, using theories drawn from social capital, please refer to Section 3.14.

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[5] Asymmetric information is when one individual in a transaction has more or better relevant information than their trading partner.

Figure 4.4: Supply and Demand of EG&S on a Farm, After the Introduction of ALUS.
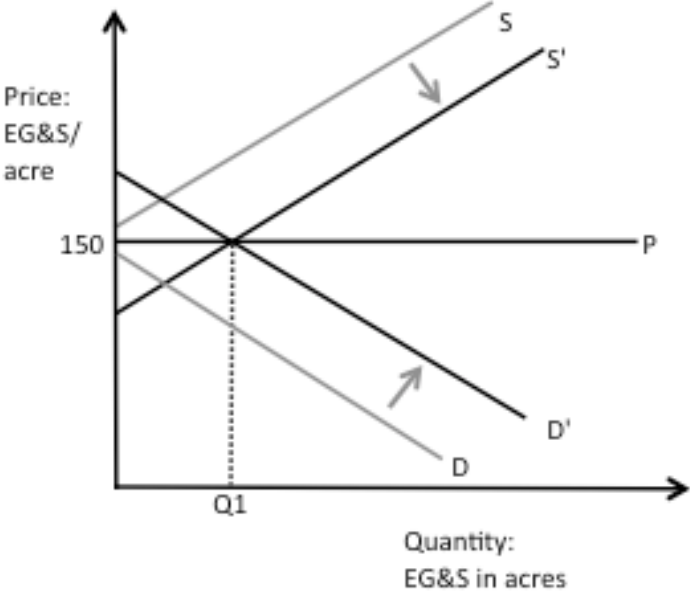
Note: This is when an individual farmer is introduced to the ALUS program.

The second additional aspect is the shift in the supply curve, from S to S'. The idea behind this shift is expressed in the proposition that I have developed: the presence of trust, or the inclusion of socio-emotional goods between farmers and the ALUS organizers encourages the provision of EG&S from their farmlands. This shift in supply occurs when farmers who were not previously enrolled in the ALUS pilot project initially sign up. A farmer will provide the quantity of EG&S on their farm where his or her supply curve intersects with the $150/acre price line. This quantity is Q1 on the graph. Thus, the shift in supply occurs because of the development of trust between farmers and program delivery agents, as well as the added communication and information sharing that occurs because of this relationship. As well, the marginal cost of providing EG&S decreases with the development of trust.

Finally, the third additional aspect is that there is a shift in the demand curve, from D to D'. Again, the idea behind this shift is that the presence of social capital and trust, and the fact that ALUS has come in to play the brokerage role, increases the demand. For example, if an organization wanted to support the provision of EG&S in Ontario, they now have an accessible avenue through which to express this demand.

This conceptual framework follows the Social Capital Exchange Theorem, that with trust, or socio-emotional goods, the number of EG&S exchanged increases. The role of social capital and trust can be understood as reducing transaction costs in the exchange of EG&S; the following section expands on how and why transaction costs can be reduced with the presence of trust.

4.5 Conclusion

This chapter presented the conceptual framework, in which I hypothesize the factors that an individual considers when deciding whether to participate in a PEGS program. It captures my proposition, that trust is a critical success factor for the participation in PEGS programs by farmers. This hypothesis is further illustrated using supply and demand. The chapter that follows describes the research methods used in conducting my case study. Then, chapter 6 summarizes the results from the focus groups, where I sought to test the conceptual framework presented in this chapter.

Chapter 5 - Research Strategy and Methods

5.0 Introduction

This chapter outlines the strategy that guided my research approach. The research strategy deemed most appropriate to address my research questions was the case study approach, as well as the use of specific methods such as face-to-face interviews, focus group interviews, and content analysis. Strategies for ensuring rigour are also explained below, as well as the way in which I determined critical success factors for the design and implementation of Payment for Ecological Goods and Services Programs (PEGS) in Ontario.

5.1 What is a case study?

A case study is a research strategy that guides the research process. Yin (2003, page 13) describes a case study as "an all-encompassing method – with the logic of design incorporating specific approaches to data collection and data analysis." Case studies are able to be implemented across multiple disciplines, and have been widely used in social science research. Yin (2003, page 3 and xiii) remarks that disciplines which have incorporated case studies include: psychology, sociology, political science, anthropology, history, urban planning, public policy, management science, social work, education and economics. I have chosen to do a case-study for my thesis research.

5.2 When are Case Studies Appropriate?

Perry (1998, page 785) writes, "the case study methodology is a rigorous, coherent one based on justified philosophical positions." It is asserted that the use of a case study approach is a

valuable manner in which to understand and explain phenomena, which includes implementation in masters' and post-graduate theses. Yin (2003, page 3) believes the case study approach to be a particularly valuable endeavour in contributing to our knowledge of social phenomena. He writes, "the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events." Based on my research questions, I was led to consider the use of a case study approach.

When deciding on my research strategy, I considered a number of alternatives. These research strategies are compared in Table 5.1, with the relevant conditions of my research highlighted in yellow. Two critical aspects of my research that make the case study approach appropriate are its focus contemporary events, and the lack of behavioural control over these events. These factors necessarily rule out experiments (which require behavioural manipulation) and historical methods (which study historical events) as my primary research strategies. Content analysis is a useful tool that is utilized in this research, however it does not take full advantage of the rich resource pool of people participating, organizing, and having a stake in the ALUS pilot who can contribute knowledge to my research. One strength of the case study approach is its ability to deal with a full variety of evidence, including documents, artefacts, interviews and observations, and so I have incorporated content analysis into my research strategy.

Finally, a survey was strongly considered as a candidate for method selection. A number of factors lead to its ultimate dismissal, including a lack of resources for completing the survey, as well as the perceived strengths of the focus group technique as an appropriate and important method for understanding the critical success factors in the ALUS program.

Table 5.1: Comparison of Research Strategies and Rationale for Case-Study Approach

Strategy	Form of research question	Requires control over behavioural events?	Focuses on contemporary events?
Experiment	**How, why**	Yes	**Yes**
Survey	Who, **what**, where, how many, how much	**No**	**Yes**
Content analysis	**Who**, what, where, how many, how much	**No**	**Yes**/no
History	**How, why**	**No**	No
Case study	**How, why**	**No**	**Yes**
My research	**Why, what, how**	**No**	**Yes**

Note: Bold indicates relevant conditions for selected research strategy
Source: Information modified from Yin (2003) page 5 (from COSMOS Corporation)

Many authors (Yin, 2003; Cronbach et al, 1980; Guba and Lincoln, 1981; Patton, 1990) note that case studies are also particularly suited for research that involves program evaluation, which is directly relevant to my research of the ALUS program. Yin (2003, page 15) explains, an "important [application] is to explain the causal links in real-life interventions that are too complex for the survey or experimental strategies." By doing a case study, researching a specific pilot project, I hope to identify links between factors within program design and implementation and program outcomes.

5.3 Criteria of judging the quality of research designs: Tests of Rigour

Ensuring rigour and quality in the development of trustworthy knowledge was an important consideration in my research. Credibility, transferability, dependability and confirmability are criteria for assessing the quality and coherence of a qualitative research design (Bryman et al, page 132). Each is discussed in turn, as it relates to my research.

5.3.1 Confirmability

Bryman et al (2009, page 132) explain that confirmability ensures that the researcher has acted "in good faith." Yin (2003, page 34) notes that it involves identifying suitable variables through which research is accurately represented. My research addresses this criterion in a number of ways. First, by using multiple sources of evidence, including iterative semi-structured interviews, focus groups, and archival research, I can cross-reference the consistency of the measures being studied against. Second, my research design draws from a chain of evidence, whereby my research questions lead to propositions, which leads to the data sources to be studied, which eventually leads to the conclusions. This chain of reasoning offers a justification

for why certain data were chosen, and the conclusions that can be drawn from the data selected.

5.3.2 Credibility

Bryman et al. (2009, page 132) explain that credibility builds on the idea that occurrences and phenomena can be interpreted by different people in different ways. They write that this entails "both following proper research procedures and submitting findings to the people studied." Yin (2003, page 36) adds that case study research involves making inferences, as the events that I am reporting about cannot be fully observed. Most of the data I receive are obtained second hand, through the re-counting of these events, and perceptions of these events by my study participants; or otherwise, by other sources of data that report upon these events (archival, observation, etc). There are some exceptions, where I experienced some trust-building events first hand, such as the twilight tours and PAC meetings. In any case, all of these observations are manipulated by observer effects. While I cannot deny that these effects are part of the inherent weakness in case study research, there are tactics that I have undertaken to minimize the negative consequences that these effects can impose on my research. A few of these tactics are offered below.

- Respondent Validation

The goal in respondent validation, according to Bryman et al (2009, page 133) is to "seek confirmation that the researcher's findings and impressions are congruent with those on whom the research was conducted." Key informants had the opportunity to review a draft of the sections in which they participated in my research. Seeing as these key informants are themselves intimately involved with ALUS, they are suited to recognize errors or inconsistencies in understanding.

- Pattern-matching

Trochim (1989, cited from Yin, 2003, page 116) describes pattern matching as "[comparing] an empirically based pattern with a predicted one." When patterns re-enforce one another, or coincide, this strengthens the power of the initial propositions. I have addressed this by having my conceptual framework to include predicted pattern of decision variables leading to a specific outcome (participation). This conceptual framework is backed up by empirical ideas from the literature about trust and social capital. I can collect evidence from the people who do participate ALUS, and who do not participate, specifically inquiring about the links between trust and participation. If these hold, then it strengthens the case that my proposition matches the conclusions that are drawn from the data.

- Address rival explanations

One rival explanation was clear from the outset of my research; As I am suggesting that trust is a critical success factor for participation in the ALUS approach, the simple rival explanation is that trust is *not* a critical success factor in the participation of the ALUS approach, or that it is not the only critical success factor. Being aware of these potential rival explanation allowed me to maintain an open mind, and seek alternative possibilities for potential success factors. It is by being open minded that I was able to consider other possible success factors of the ALUS approach (such as liability, or communication for example).

- Logic models

Yin (2003, page 127) describes the use of the logic model technique as "matching empirically observed events to theoretically predicted events." The process involves a chain of events, over time, staged in "cause-effect-cause-effect patterns" (Yin, 2003, page 127) The dependent variable being studied is examined empirically, however instead of assuming the final outcome as directly impacted, the researcher looks for a causal chain of events that could lead to the final outcome. My conceptual framework is essentially a causal sequence of events. Each

step in this chain is logically justifiable. Logical completeness throughout the conceptual

framework of one's research strengthens internal validity.

5.3.3 Transferability

This criterion addresses the notion that qualitative research, according to Bryman et al

(2009, page 133) tend to produce context-dependent findings. Bryman et al. (2009, page 133)

encourage qualitative researchers to focus instead on thick descriptions, which are "rich, detailed

accounts of a group's culture or people's experiences." By virtue of the small percentage of the

population that was involved in my research, the results cannot directly reflect a whole county or

province. I hope to provide a detailed explanation of my observations, rather than highly

generalizable statements about the participation processes of farmers in the county/province at

large. When generalization is discussed within the context of case studies, I refer to analytical

generalization, as opposed to statistical generalization (as Yin (2003) points out on page 37. This

refers to the idea that the particular set of results drawn from the research are applicable to some

broader context.

While I am limited in external validity by the fact that I am conducting a single-case

study, I did have the opportunity to discuss my ideas and propositions with scholars doing

research about similar cases. While this is not replication logic, it can serve a similar, albeit

weaker, purpose of determining whether my proposition holds across cases.

5.3.4 Dependability

To establish dependability, Lincoln and Guba (1985, In Bryman et al, 2009, p.133)

suggest that researchers should keep complete records of the entire research process. While my

research did not specifically include a peer-auditing approach, I did consider reliability as a

parallel criterion for dependability. Yin (2003, page 34) defines reliability as "demonstrating that

the operations of a study -- such as the data collection procedures – can be repeated with the same results." The essential aspect of quality assurance is the minimization of both biases and errors in conducting of the research. Ideally, another researcher would be able to repeat my research, and come to the same conclusions as I have. However, I do not believe that this is entirely feasible in case study research; as was identified in section 5.2, case study research examines contemporary events. Suggesting that another researcher attempt to replicate the study in the future is impossible.

Although difficulties exist in the potential for replication of my research, it falls into a distinctive position where there is another researcher studying the same organization, albeit with a different research focus. The extent to which our research makes sense within the context of the other, when we each used separate processes and logical chains of reasoning, can add to the claims of the quality of our research, and the reliability of our conclusions. If we are accurately reporting the data that we collected, we ought not have conflicting conclusions.

5.4 Limitations of Case Studies

While there are many advantages to using case studies, there are also weaknesses. Some of the criticisms attributed to case studies include: insufficient precision, which can result in overly lengthy documentation; lack of objectivity or little basis for scientific generalization; and a lack of rigor, which includes sloppiness equivocal evidence, or introduction of bias into the study and its findings (identified by Yin 2003). It must be noted that many of these criticisms stem largely from the individual doing the case study, and the effort that they put into their work, and is not necessarily an inherent weakness of the method itself. Stewart and Shamdasani (1990, page 12) add to this list of weaknesses, but for focus group research specifically, that there is the view that focus group interviews do not yield 'hard' data, and the concern that group members

may not be representative of a larger populations (small numbers, idiosyncratic nature of the group discussion.) While these are valid points, these were not the goals of my research. I conducted my case study, doing exploratory research, using a specific organization to motivate my work, and so highly generalizable results and hard data were not the type of results I was aiming to achieve.

5.5 Methods

There were several methods that I employed in my research. These include focus group interviews, one-participant interviews, and content analysis. These are explained in turn.

5.5.1 Focus group interviews

I used focus groups as one of my methods for interviewing farmers in Norfolk County. I held two focus group meetings: the first was a group of farmers who currently participate in the ALUS pilot project; the second was a group of farmers who do not currently participate in the ALUS pilot.

Focus groups have been a staple method in marketing research, and in the last decade have started to gain popularity as a research method in social sciences (Liamputtong and Ezzy, 2005). Khan and Manderson (1992) describe a focus group as a "qualitative methods with the primary aim of describing and understanding perceptions, interpretations, and beliefs of a select population to gain understanding of a particular issue from the perspective of the group's participants."

A focus group is an interview that is (usually) composed of between 8 – 12 participants. I conducted two focus groups, with 11 participants in each. I had a moderator, my research colleague Paul Guerra, to manage the interactions and discussion. My own role was as an

observer, recording the data that emerged from these focus groups. The focus group technique brings together a group of people who might have similar experiences and/or concerns; in my case, both groups had a singular experience uniting them. Focus groups were developed as a method of seeking in-depth information about a topic. As Goldman (1962, page 61) notes, focus group interviews involve "seeking information that is more profound than is usually accessible at the level of inter-personal relationships." This is because of the open-ended interactions and discussions among group members, which can lead to the stimulation of thoughts, and revelations that might not be present in a one-on-one interview. This is described as group dynamics in the focus group literature. It refers to the idea that participant's responses and behaviours are altered by being the member of a group. Thus, this technique enabled me to focus on the participants' knowledge and experiences.

My focus groups were designed with participant ease and comfort in mind, so as to retrieve the most honest and unrestricted information as possible from them. Stewart and Shamdasani (1990, page 36) write "in focus group interviewing, the key to success is to make the group dynamic work in service of the goals and objectives of the research." Variables that affect this group dynamic include intrapersonal variables (such as demographic, physical, and personality variables) and interpersonal factors (such as expectations and beliefs about how others in the group will behave). While I will not go into depth on these issues, they have been thoroughly considered in Stewart and Shamdasani (1990). I designed my focus groups so as to harness the information that group dynamics can bring to an interview. These include: enabling communication amongst group members through interactive question techniques, as well as attempting to account for compatibility and comfort issues by selecting participants according to specific characteristics. According to Terborg et al. (1976), similarities in background and

interests help form group cohesiveness. I took advantage of the fact that there were two mutually exclusive groups of farmers in Norfolk county: those that do participate in ALUS, and those that do not. In this way, they immediately have a similar background upon which they can relate to each other. Moreover, all participants in my focus groups had the commonality of being farmers in Norfolk county. This enabled the differences in their perspectives and underlying issues to be highlighted. Importantly, the nature of the focus group itself has a built-in cohesion-enhancing element; Stewart and Shamdasani (1990, page 42) write, "the sharing of experiences and recognition that others have had similar experiences add to the cohesiveness of the group."

Other actions that I have undertaken to ensure high quality and consistency in my focus group research included: providing incentives for participation, and selecting convenient times and locations for the meetings for the average participant. Environmental influences, such as aspects of the physical environment within which the focus group took place including personal space, spatial arrangements, and the room itself were considered as well.

I selected my research partner, Paul Guerra, to be the moderator for these groups, which allowed the added benefit of him having a thorough understanding of my research objectives. This helped to ensure the effectiveness of my focus groups, as I was able to help him prepare, discuss potential issues, and caucus with him partway through and troubleshoot any issues. He/she does not focus on the recording of data, instead, his/her sole focus is the management of discussion, including asking questions, guiding participants to speak to certain topics, ensuring comfort for all participants, and maintaining a level of order so that respondents are not speaking over each other

- Focus Group Data

Stewart and Shamdasani (1990, page 12) refer to data derived from focus group research

as having ecological validity, in that there is "a minimum of artificiality of response… focus groups produce a very rich body of data expressed in the respondents' own words and context." Participants have the opportunity to qualify and discuss the reasoning associated with their responses. This makes the focus group technique particularly suited for situations that are not well-understood or conceptualized, as individuals can use their "own categorizations and perceived associations" (1990, Stewart and Shamdasani, page 14) In my case, I used the focus groups to test the accuracy of my conceptual framework. This was a useful approach, as the interaction between the participants enabled a richer dynamic set of responses than I would have obtained through individual face-to-face interviews. Table 1 in Appendix B summarizes the advantages and disadvantages of focus group research.

5.5.2 In-Depth Interviews

A second method that I used was in-depth interviews. I drew on semi-structured interviewing, which enabled me to draw on the benefits of both structured and unstructured interviewing. Hesse-Biber and Leavy (2006) characterize semi-structured interviews as "rely[ing] on a certain set of questions, and guiding the conversation to remain, more loosely, on those questions… [while] allowing respondents some latitude and freedom to talk about what is of interest or important to them." I did not ask all participants the exact same set of questions; nor did I expect the answers to fall into a limited set of response categories two features which typically characterize structured interviewing (Fontana and Frey, 2005). Instead, the questions for each interview were mostly drawn from an interview guide tailored specifically to each group of interview participants, as outlined in Table 5.2. For the majority of my interviews, I met with one participant per meeting.

The length of time per interview, and number of occasions on which I interviewed these

participants, varied by the type of participant. For example, I have interviewed the key informants many times, but I have only interviewed the other EG&S researchers, and NGO leaders one time each. The time of each interview was within an approximate range of 30 minutes – 2 hours. I used a digital recording device only after receiving verbal and written consent from participants, although no participants declined the use of the recording device. I added several questions specifically tailored to each interview participant, depending on their historical and current involvement with the ALUS project. When I felt the need to deviate or improvise, change the order, or skip a question during the interview, I acted upon these inclinations.

Semi-structured interviewing was appropriate for my purpose, as I endeavoured to both comprehend and explain perceptions and understandings of the ALUS approach at differing degrees of involvement with the ALUS pilot project. Semi-structured interviewing allowed for the achievement of both goals. The interviews were often conducted in pairs. The other interviewer was Paul Guerra, another researcher working on a similar topic with a largely overlapping pool of interview participants as myself. The reasoning for having an interviewing team was that it allowed for a smoother and more fluid interviewing process; while one researcher is writing, the other can maintain eye contact and display visual and verbal cues of listening.

I used both closed-ended questions and open-ended questions in the interviews. Closed ended questions were be answered by either 'yes/no' responses, or response categories on a Likert scale. I also used open-ended questions in my interviews; this question type is used when the interviewer seeks to understand an issue with more depth (Fontana and Frey, 2005). Open-ended questions gave the participant room to take control, established the context and to reflect

upon information that they deem important, rather than to be lead by the question.

Table 5.2: Identification of Groups and Individuals as Interview Participants

Groups to interview	Individuals to interview
ALUS organizers	• Bob Bailey - VP policy, Delta Waterfowl • Dave Reid – Norfolk Land Stewardship Council Coordinator • Bryan Gilvesy – Chair of the ALUS Partnership Advisory Committee • Kristen Thompson - ALUS coordinator • Steve Scheers – Norfolk County
General Farm Organizations	• CFFO • O John Clement, General Manager

Norfolk County Residents	• Rural, farm landholders/farmers
	  • ALUS adopters
	    • Early adopters
	    • Later adopters
	  • Non-adopters
	• Rural, non-farm landholders/farmers

EG&S researchers	• ALUS researchers
	  • Wanda Gorsuch, Manitoba ALUS researcher
	• EG&S researchers
	  • Tristan Knight, case study comparison for EG&S programs in Canada and the US

Other organizations (government and NGOs) with environmental interests	• Government
	  • OMAFRA
	  • AAFC
	• NGOs

Note: While this was a plan for potential interview participants, the actual interview participant list turned out to be slightly different than the one above.

Each question type yielded differing advantages: closed-ended questions had an ease of coding, and allowed for greater comparability amongst participants. Open-ended questions allowed for a deeper explanation of a theme and could more accurately reflect the concerns of the participants (Geer, 1991).

In the interpretation of my data, I examined errors that can be introduced through interviewing, and assessed the rigour of the data that I collected. This study has obtained clearance from the University of Guelph's Research Ethics Board. I addressed ethical consideration in many stages throughout the interview process. I obtained written consent from each participant. They were given the option of passing on any question they do not wish to answer. The key informants were given a chance to review the material of theirs that I made use of before submitting my final thesis.

5.5.3 Content Analysis

Weber (1990, page 9) defines content analysis as "a research method that uses a set of procedure to make valid inferences from text." It is essentially deriving and categorizing messages from textual material, and reducing into the relevant pieces of information. Hesse-Barber and Leavy (2006, page 280) describe it as using nonliving materials to study the social world." They label this type of analysis as 'unobtrusive methods' and they write (2006, page 286) that they are developed "out of the assumption that we can learn about our society by investigating the material items produced within the culture… the texts and objects that groups of humans produce are embedded with larger ideas those groups have, whether shared or contested."

I used content analysis to better understand the processes that inform people's perceptions of ALUS. Sources of data included local and national newspapers, official

documents, the ALUS Partnership Advisory Committee meeting minutes documented since its inception, the ALUS Technical Advisory Committee meeting minutes, EG&S conference minutes and the Norfolk County benchmark survey. These sources allowed me to document changes over time in both the forms that these processes take, as well as the changes in reactions and behaviours when they were recorded in text. Content analysis was also largely a tool for triangulation, which is explained in the following section.

5.5.4 Triangulation

Denzin (1970) describes methodological triangulation as the comparison of many (three or more). It is used to examine for convergence between findings in the use of these different methods, and can strengthen the credibility (or confidence) component of one's research. Hesse-Barber and Leary (2006, page 206) write about using multiple methods in that "the methods inform one another and are used in a reflective way that creates a more complex understanding of social reality." Pope and Mays (1995) add that three or more techniques must be compared, and that it can be used as a check for validity, or the extent to which a measurement truly reflects the phenomenon under scrutiny. The process of triangulation involves an awareness of the divergence of answers derived from the use of different techniques.

Yin (2003, page 83) writes of the use of triangulation in case studies in terms of three important principles for data collection: The first is multiple sources of evidence. The researcher diagnoses whether they converge on the same findings. Second, a case study database, which is "a formal assembly of evidence distinct form the final case study report." And finally, a chain of evidence which includes "explicit links between the questions asked, the data collected, and the conclusions drawn." I used triangulation to establish the critical success factors for the design and implementation of a PEGS program, as I further explicate below.

5.5.5 Critical Success Factor Analysis

I used methodological triangulation to guide what have emerged as the congruous points shared among the three methods I used, as Figure 5.1 demonstrates below. I have called these congruous variables the critical success factors of designing and implementing a Payments for Ecological Goods and Services (PEGS) program, with particular focus on the ALUS pilot project in Norfolk County. They are what I have identified to be the factors that contribute to successful design, promotion and implementation of a PEGS program.

Figure 5.1: Critical Success Factors that Emerged through Methodological Triangulation
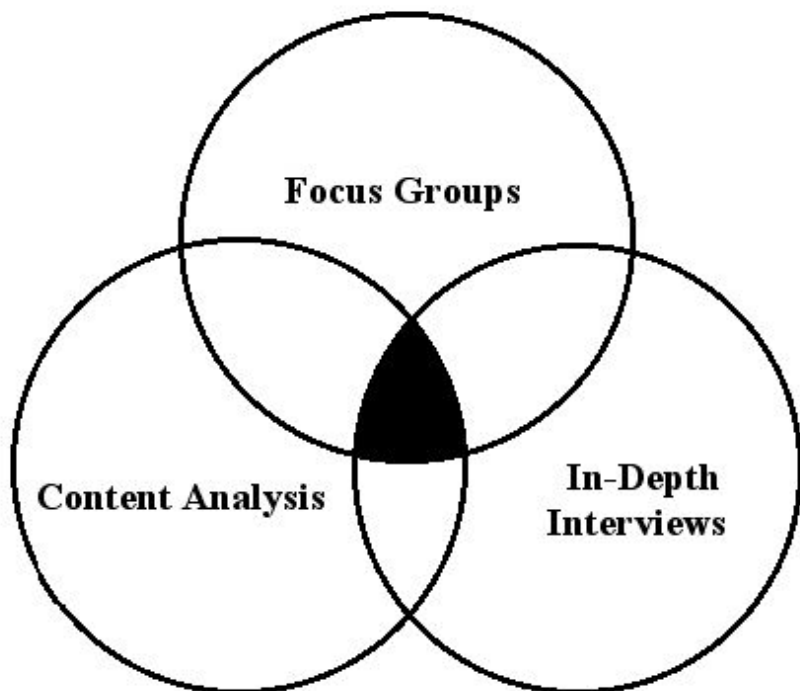
Note: The critical success factors for the design and implementation of the ALUS pilot in Norfolk County emerge from the intersection portrayed by the shaded area in the middle.

5.5.6 Pros and Cons of Using Triangulation to Establish Critical Success Factors

Using the congruous themes that emerged from each method, and calling those the

critical success factors for the design and implementation of a PEGS program is not the only way

in which they can be determined. The section below highlights some of the pros and cons of

establishing the critical success factors in the way that I have.

- Cons

First, because the theme needed to appear across all three methods, if it wasn't important

to one group of people, it might not have appeared as a critical success factor. So, my list of

critical success factors may be missing a programmatic aspect that is very important to one group

of stakeholders, but without an overlap, it would not be considered a critical success factor. The

theme might even be critical to the program's functioning; for example, if there was something

about the ALUS program that specifically drew in all participating farmers, but was not

recognized by program practitioners as important, it would not appear on my list of critical

success factors. A second drawback to this approach is that there can be a dynamic and changing

nature of perspectives; perhaps when I spoke to the respective participants in my research, they

expressed those themes that were important to them at that time, and in that stage of the pilot's

development. New and different themes might emerge as the program matures, and these would

not be captured in my research. Finally, methodological triangulation usually makes use of the

same sample, rather than the use of three different sample pools as I have. This is a limitation

because methodological triangulation draws its strength from having consistency across methods

given the same set of data. I, however, am drawing in from three different sources of data. But, it

is still useful in determining the critical success factors for the implementation of PEGS

programs because all three data sets are focused on the same topic, and speak to many of the

same particularities in their discussions of PEGS programs.

- Pros

I thought that the use of methodological triangulation would be an appropriate and persuasive manner in which to determine the critical success factors in my research. First, this approach captures and combines the points of view of a variety of stakeholders in the development of the ALUS pilot. Ensuring that the voices from a variety of groups of people, all of whom have a role to play in the functioning of the PEGS program, are considered within this approach. Thus, my research can be appropriate for a wide variety of people. Second, it builds on the well-documented benefits of using triangulation, including those discussed in section 5.5.6. Finally, by only include those themes that emerged as congruent between all three of my methods, my list becomes much shorter than the 10 – 15 themes that had emerged in each method respectively. I believe that critical success factors, in order to be useful to program designers, cannot be too numerous, or else it can become cumbersome to try and focus on too many different factors at once. Mike Morrison (2009) agrees, in noting that a list of critical success factors ought to contain between 5 – 7 factors in order for an organization to make use of these themes effectively.

5.6 Summary

The section above described my research strategy and methods for my case study of the ALUS pilot project in Norfolk County. The chapters that follow describe the outcomes of these methods, as well as a discussion about the results and critical success factors that were established.

Chapter 6 – Focus Group Results

ALUS Farmer Participants and Non-Participants

6.1 Introduction

On December 8th and 10th, 2009, I held two focus groups in Norfolk County, Ontario to explore and compare differences in perceptions about ALUS in the farming community. The first group was composed of 11 Norfolk County farmers who were current participants of the ALUS pilot project (hereafter referred to as 'participants'). The second group was made up of 11 Norfolk County farmers who were not participating in ALUS (hereafter referred to as 'non-participants'). This chapter is an analysis of the data that came out of these meetings. This chapter's objective is to compare and contrast the perceptions of these two groups in an effort to understand the decision-making process for participating in ALUS. The chapter is organized around three broad themes: motivations for participation, access to information, and participation decision variables. The outline of this chapter is displayed in Figure 6.1, so that the reader has a visual depiction of the flow of the chapter.

Figure 6.1: Framework of Chapter 6

Motivating Factors

Section 6.2

Access to Information

Section 6.3

Participation Decision Variables

Section 6.4

Outcomes

Participate in ALUS

Do not Participate in ALUS
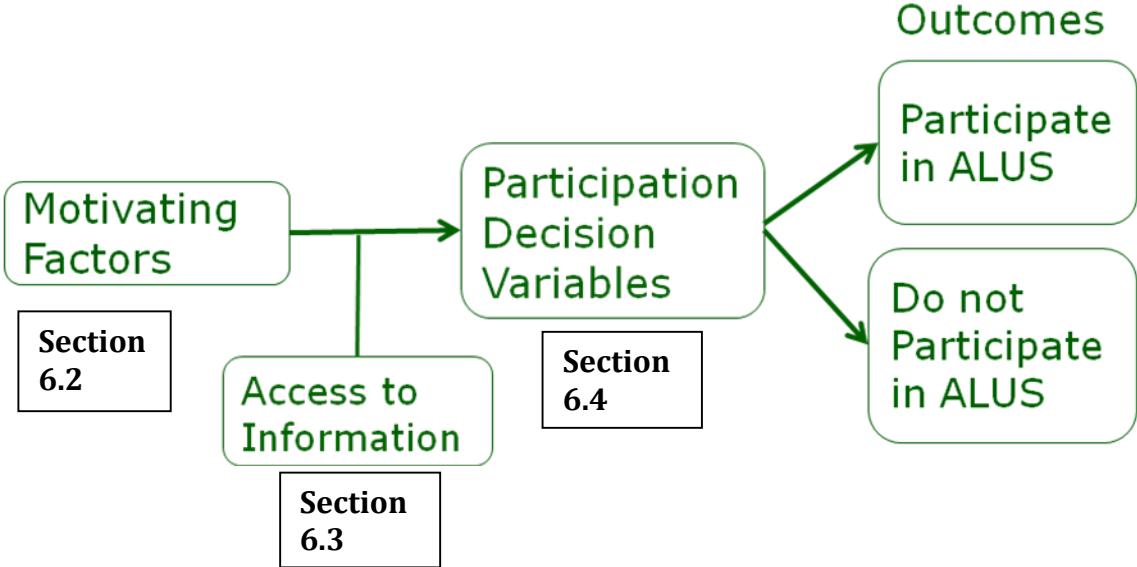
6.2 Motivations to Participate in ALUS

From the ideas discussed in my focus groups, there seemed to be three motivations that encouraged farmers to initially look into a PEGS-type program, including ALUS. These motivations were: monetary incentive, stewardship ethic, and community encouragement. These three motivations were very similar to those that I hypothesized in my conceptual framework, which were, in the same order as presented above, monetary, moral and social capital motivators. These hypothesized motivators came from preliminary interviews and relevant literature, and they ended up being quite closely connected to the resulting motivators from the focus groups.

6.2.1 Monetary Incentive

> *"I appreciate that it pays for my time. ALUS increases the scale at which farmers can do things for the environment on their farms, they can afford to spend more time on planting more trees, and doing other positive changes."*
> *– ALUS Participant*

> *"If there is enough money in it, sure I'll participate"*
> *– ALUS Non-Participant*

The monetary incentive, as a motivator to learn more about the ALUS program, was discussed widely in both focus groups. Both groups acknowledged that their farming decisions are informed by profitability. For some non-participants, the monetary incentive was an essential encouragement to participate in ALUS, but the current land-rental rate compensation was not large enough to motivate them to consider participating in ALUS. One non-participant noted, "There isn't enough money offered per acre. The problem lies [in the amount] of incentive offered." The issue of the amount of compensation being too low was unique to non-participants.

Among the participants, many of them spoke to the fact that the reimbursement for the conversion cost was incentive enough to participate in an agricultural-environmental program.

One ALUS participant noted that she appreciates the conversion cost in and of itself, even without the yearly payments: "the fact that the conversion cost is paid for takes a lot of the decision out of it for me." For others in the participant group, the annual payment was an essential motivator in considering a PEGS program. There were differing opinions amongst the group about the dollar value necessary to be considered enough incentive. It can be deduced that the $150/acre/year payment was at least enough, or more than sufficient, as an inducement to participate in ALUS for the participants when considered in concert with all the other motivators; this was demonstrated by their choice to look into ALUS, and ultimately participate in the program.

Both groups acknowledged a stipulation to having a monetary incentive to participate; this was that the monetary incentive didn't necessarily imply that they needed to earn added income from participating in ALUS. Instead, participants agreed that 'no financial cost' was an important motivating factor to their participation. Some of the non-participants agreed with this sentiment as well, though not the majority of them. One non-participant noted, "It's the issue of affordability. Even if it's only $150 an acre, it allows [environmental projects] to become marginally bearable." It can be implied, then, that having an income support program is not necessarily the desire of farmers in Norfolk County. Instead, the payment for service concept acts as a motivating element, to induce farmers to consider signing up for ALUS. Having payment offset the costs of implementing on-farm agri-environmental projects is seen as incentive enough for many participants, and non-participants. It can also be interpreted that there is a segment of the population of farmers in Norfolk County for whom a payment of the land rental rate per acre of EG&S delivered is simply not enough; the payment level serves as a

barrier to participation, and it is likely that these farmers will not become future participants in the ALUS program unless the payment level increases.

One final message was that throughout both focus groups, it was said that incentive was part of the motivation, but not the whole story. There were other motivations that came into play in their decision to look into ALUS.

6.2.2 Stewardship Ethic Motivation

> *"It's encouraging… to see observable differences to the environment and positive changes on your farm"*
> *– ALUS participant*

> *"You need to look after the soil or it won't look after you."*
> *– ALUS Non-Participant*

The idea that farmers have always been stewards of the land was raised multiple times, in both the participant and non-participant focus groups. All of the farmers from the non-participant group agreed that 'being a good environmental steward' would be a motivating factor that they would consider, should they participate in a PEGS program in the future. One non-participant spoke to this idea in noting that, "ALUS has the potential to help farmers do the right thing." Another non-participant said, "ALUS is good because it could allow me to do the things I feel I should, it makes them financially feasible." There was, however, at least one stipulation in this motivator for the non-participants. Many of them pointed out that they had already done a lot of the projects that ALUS encompasses in their regular approach to farming. For example, one non-participant noted, "good land stewards have already done most of these projects, especially grasslands, maybe grass spillways, buffers along water courses, they've quit working the land right to the edge, they fix erosion problems, and they've put in windbreaks." As other non-participants shared the environmental initiatives that they had already completed on their land, it

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became clear that many of these overlapped with the ALUS projects. This speaks to the belief that some farmers are inherently good environmental stewards of the land, as a moral duty.

In explaining from where their stewardship ethic was galvanized, both the participants and the non-participants indicated that their children and grandchildren were an encouraging factor. Half of the participants mentioned that it was their children who encouraged them to look into ALUS. One non-participant said, "there is a pressure from our children and our grandchildren about the way we're taking care of the environment. I was embarrassed about our legacy, and I understand its repercussions." The notion of taking care of the land for use of future generation seemed to hold strong in the minds of many participants and non-participants.

Another motivating factor to learning about the ALUS program was the personal enjoyment that the farmer and his or her family would get to benefit from having ecosystem services on the farm. The creation of wildlife habitat has the potential to create scenic views and a diversity of wildlife upon the farmer's personal property, which, for some, is considered a motivator within environmental stewardship. For one participant, knowing that he would be able to observe positive environmental changes right on his farm was motivation in itself.

There were some individuals, both participants and non-participants, who were of the belief that farmers who do environmentally beneficial things are a specific type of farmer. They noted that there is something inherent in their philosophy and worldview that encourages them to think that way.

6.2.3 Community Encouragement

> *"ALUS brings out a sense of community… it brings me down to the land, and connects me to Norfolk County. That's what makes it feel so good."*
> *- ALUS participant*

"I liked the approach with regard to the relationship between community, farmers, and agriculture. We share a resource, and it's an important way of dealing with that together."
- ALUS non-participant

From discussion amongst the ALUS participants, they stated that community, or social capital-type, pressures were considered in encouraging them to look into signing onto ALUS. Some examples of these motivators included: hearing about it from a farmer in the community, encouragement from a neighbour, having the Norfolk Land Stewardship Council supporting ALUS, having the Norfolk Federation of Agriculture being a partner, and having a son or another family member encourage the farmer to look into it.

One contributing factor to pressure from the community was learning about ALUS from various neighbours' signs up on their farm gate promoting the ALUS pilot project. Although their neighbour might not have told them directly about ALUS, the sign up on their farm gate was motivation enough for some of the participants and non-participants to look into the ALUS program. One non-participant discussed the relevance of signage, in both ALUS and the EFP: he said, "there is a bit of value of having a sign on your farm… your neighbours see it, and they say 'Bob took them time to do it' and does that make [him] a better, more respected person?' Probably a little bit.'" Perceived reputation effects amongst members in one's community can motivate learning about the ALUS program.

Many of the participants cited neighbour's encouragement as motivators for looking into the ALUS pilot. However, community motivators can work oppositely as well, by discouraging a farmer to looking into a PEGS program for their farm. One non-participant shared his story about the presence of a particular neighbour dissuaded him from looking into ALUS:

> "I had some beavers move into my property, cut trees down, build a dam. Didn't bother me, cutting down poplar trees. Neighbour stopped me and asked 'what are you going to do about them beavers?' I says 'Nothing, they're not bothering me.' Neighbour says

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'What about me? I'm downstream.' So it's not just what I do, but how does it impact the people around me. I might have good motivation, but if it negatively affects my neighbour's cornfield, he's not going to be too happy about it."

Neighbours, then, are important motivating as well as discouraging factors in choosing to look into the ALUS program. One participant adds that being motivated to join into ALUS depends in part on what your neighbours are willing to look at. If neighbours are also amenable to the idea of ALUS, or are participants themselves, it might be easier for other neighbours to consider looking into it as well.

Having the farmer-to-farmer approach as the first contact seemed to be important to participants and non-participants alike. One non-participant observed that it seemed to be very important to pick someone that the community knows, when you go onto their farms, they know who you are. Another non-participant elaborated by explaining that using this community connection is important for accessibility in learning about ALUS. She said, "if it's a local person that is designated as your contact person, at least you know you could pick up the phone and call your guy. You want to be able to reach out and touch him, if he doesn't answer his phone, you can go to his door." The farmer-to-farmer approach is a key attribute of the ALUS program, and so they could harness this program element in their favour, in terms of motivating farmers to engage in the ALUS process.

A distinction was made, in the non-participant group, between public pressure and community pressure as a motivator to look into the ALUS pilot. The group agreed that public pressure, from urban centres for example, would be a discouragement to signing up for a PEGS program. One non-participant explained, "that would get my back up." However, the group established that it is different if the encouragement comes from a local farmer in the community, that it would instead be a positive motivator. One non-participant summarizes this view: "If you

say the public, if you mean the urban public… this is not a positive pressure. It's different if it's a neighbour-to-neighbour approach like it is here. It depends. The motivator depends on who is doing the asking." The non-participant group, then, echoed perceptions that were shared in the participant group; the farmer-to-farmer approach seemed to be an important motivator to engaging farmers in the ALUS approach.

Finally, the potential of having a program like ALUS foster a sense of community amongst participants encouraged some to look into the program. About one third of the participants remarked how rewarding it has been to get farmers together doing something good for the environment. One participant said "ALUS brings out a sense of community… it brings me down to the land, and connects me to Norfolk County. That's what makes it feel so good." Thus, ALUS' approach of gathering farmer support in Norfolk County, and fostering a sense of group and community through their various activities can act as motivation for farmers to participate in the pilot project.

6.3 Accessing Information about ALUS

> *"Farmers talk when farmers get together."*
> *- ALUS participant*

> *"It takes so long before people know about others doing it [ALUS] and how it works."*
> *- ALUS non-participant*

Once farmers in Norfolk County were encouraged to consider a PEGS program, the next step in selecting a program was gathering information about the ALUS pilot. Both the ALUS participant and non-participant focus groups shed light on perspectives on accessing information about ALUS in Norfolk County. From responses in my focus groups, some of the sources through which farmers heard about ALUS have included: the Norfolk Federation of Agriculture

mailings, ads in the newspaper, newspaper success stories, direct mailings from ALUS, and word-of-mouth.

Both participants and non-participants noted that word-of-mouth seemed to be an effective way for getting information out into the farm community. This involves farmers learning about the ALUS program from speaking to each other. One non-participant remarked, "knowing people [in the community] helps bring relevant information to you." One of the participating farmers discussed the mix of types of farms and farmers that co-exist in Norfolk county. He labels Norfolk County as a place where "farmers are reasonably active and 'out there' politically. They would rather put up barricades than sit you down for coffee." This participant suggested that farmers in Norfolk County as a place where farmers are harder to reach, in terms of getting program information out in the community.

Other factors that were discussed, in terms of acting synergistically to aid in the process of getting accessible information out into the community included good timing; some participants and non-participants spoke of a current 'green movement', and suggested that there might be increasing willingness of farmers to want to do environmentally conscious projects on their farms. If this was a prevalent belief amongst Norfolk County farmers, this could accelerate the ease with which ALUS could get information out to the farming community. Another factor was how well ALUS could fit into the marketing of other programs in the community. Other environmental programs (such as the EFP, Species at Risk Programming, Tree planting program, etc.) available to farmers in the community could be either beneficial or detrimental to accessing information about ALUS. On the one hand, if farmers open themselves up to learning about one program, they might gain access to information about related programs, and how these programs could fit together on the farm. On the other hand, if it is perceived that there are many programs

out there, it could become overwhelming and be a detriment to accessing information about ALUS. Thus, access to information depends upon how willing the farmers are to invest time in accessing information about ALUS, as well as how streamlined the information it is when presented to farmers.

Individuals in both focus groups discussed the issue with using flyers or mailings to get information out to the community. One participant said, "it's just another flyer, and flyers are simply thrown away." A non-participant adds, "it's hard to keep ALUS on top of the pile of brown envelopes, my desk is littered with brown government envelopes. I just think to myself, I'll deal with it later." There were also many comments made about the increasing complexities of on-farm environmental programming. Participants and non-participants gave examples such as the increasing complexities in environmental farm plan over the years. These complexities could act as a barrier to accessing information about ALUS. The additional learning about a new program, and seeing whether it is a fit on a farmer's property, can be seen as a hurdle to accessing information about the program. As another non-participant said, "I just don't need another file in my cabinet."

It was apparent that both participant and non-participants knew about ALUS, and had some ideas about its role and functions in Norfolk County. Table 6.2 compares responses from participants and non-participants in their definitions and understanding of the ALUS program[6]. From this comparison, it is evident that while participants and non-participants shared conceptions of the program in terms of its financial incentive, its merit, and its environmental benefits, they differed upon other conceptions, such as whether ALUS represents a land-use loss or whether it promotes the use of marginal land. Also, participants focused on the perceived

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[6] The actual question asked to both groups was: Describe in 2 words. Then everyone read their answers out loud.

rewards that come with participation, whereas non-participants mentioned sequestering carbon and the green movement as descriptors of the program.

Table 6.2: Participants and Non-Participants Describe ALUS With Two Characteristics

Participants	Number of Participants Who Agreed on the Characteristic	Non-Participants	Number of Non-Participants Who Agreed on the Characteristic
Similar Responses Between Focus Groups			
- Financial Incentive - Good principle, good idea - Habitat benefits, conservation, sustainability - Environment, climate improvements	1 2 6 5	- Financial incentive - Good principle, good idea - Habitat benefits, conservation - Environment, climate improvements	6 2 3 2
Different Responses Between Focus Groups			
- Funding challenges - Ability to use marginal land - Farmer-to-farmer - Fair, equitable for farmers - Rewarding, observable differences	1 2 2 1 3	- Helping farmers do the right thing - Loss of farm-use - Fits into the green movement - Carbon Sequestration	1 1 1 2

Note: There were some similarities in the defining characteristics for both participants and non-participants. In each focus group, I had the participants and non-participants describe ALUS using two words. The first section of this table observes the similarities in the characteristics used to describe the ALUS program between the participants and non-participants. The second section of the table reports the differences of opinions in describing the ALUS program between the participants and the non-participants.

- Quality and Accuracy of Information

Not only was having access to information about ALUS important, but so too was the quality and accuracy of this information. Especially apparent from the non-participant focus group was the fact that there were quite a few misinterpretations about the role and activities in the ALUS program. However, these perceptions only seemed to be prevalent among non-participants, which I believe speak to the educational and learning component that occurs in the ALUS process. Table 6.3 describes perceptions held by non-participants, which demonstrates the lack of clarity in their understanding of the ALUS program.

Table 6.3: Perceptions about ALUS held by Non-Participants: Hindrances to Participation in ALUS

Perception	Explanation
Added liability with participation in ALUS	- Perception that if they are being paid to provide EG&S, that their land becomes open to the public. - Spoke of 'society' and 'the public' coming onto their land, and then about the liability issues that can come out of that, and the cost of insurance.
Fear of Added Government Interference	- Worry that the creation of more habitat can lead to more restrictive legislation - For example, in creation more habitat, they might be opening themselves up to restrictions from the Species at Risk Act
ALUS vs. Government	- There was some confusion about whether ALUS was a government program itself, or whether it was at arm's length from the government. - Many non-participants spoke of ALUS as if they were government officials running a program.
Worries of Poor Communication	- There were concerns about whether there would be good communication with the ALUS organizers, and about receiving follow-up when it would be necessary
No New and Additional Projects	- There was the impression that there wasn't necessarily anything new that ALUS could do on their farm, because they had done off of the projects that ALUS could offer them by virtue of being good stewards of the land.

Despite the accuracy of information, it was apparent that even the non-participant group had access to knowledge about the ALUS pilot program in Norfolk County, as each individual in the group had heard about ALUS before. The ability to get information out into Norfolk County, and specifically the farming community, will be addressed by the end-of-pilot benchmark survey scheduled to be completed in 2011.

6.4 Individual Decision Variables

Investigated in both focus groups were the factors that lead to the ultimate decision of whether or not to participate in the ALUS pilot project in Norfolk County.

This section is organized around 8 themes that emerged from the two focus groups:

1.Communication between ALUS organizers and Norfolk County Farmers; 2.Fears of increased liability and regulatory interference; 3.Simplicity and ease of ALUS process; 4.ALUS' distinction from government programs; 5.Farm goals and ALUS goals; 6.Participatory processes; 7.Confidence in the ALUS program; and 8.Trust.

6.4.1 Communication Between ALUS Organizers and Norfolk County Farmers

"ALUS talks the same language as me. They are on the same level as me."
- ALUS Participant

One factor that affected the participants and non-participants' decision to participate was the ease with which they could communicate with ALUS programmers. All of the participants agreed that the communication with the ALUS organizers was, in their words, "good" and "easy." One participant said that she had been treated "more than fairly" by the ALUS organizers, and "they go out of their way to be of good use." Another participant noted that ALUS organizers "are on the same level as me. That is part of what makes communication so

easy." It was clear from the perceptions of the participants that their communication with the ALUS organizers was a positive and important element of the program.

The non-participants told a different story about their communication with the ALUS organizers. One non-participant shared her experiences with playing phone tag, and experiencing confusion when she required some input about a potential ALUS project on her farm. In this particular situation, there had been some changes in project coordinator when she was trying to call in with her questions; but the role of the coordinator, to her, did not seem clearly defined. She said, about the situation, "it's not a big thing, just some confusion. But that makes me decide that maybe I don't want to do anything else, because I can't get this one simple thing done." To non-participants, having a properly communicated program was important.

Another aspect that was essential to good communication, for both participants and non-participants, was the accessibility of ALUS organizers. Accessibility was described as the ease with which farmers could reach an ALUS representative, to have their questions and concerns addressed. This seemed to be a point of divergence between participants and non-participants. Participants believed that ALUS organizers and back-up assistance was easily accessed. One participant remarked, "you can ask people when you have questions or concerns, and they are easily reached." Non-participants, however, expressed a less positive view with respect to accessibility. There were some in the group who even attributed a major reason for not participating in the pilot to the fact that ALUS representatives were difficult to get a hold of. Holding accessibility with such high regard demonstrates the importance of good communication in an agricultural-environmental on-farm program. It was clear from the discussions with both groups that there was a divergence in the perceptions of ease of communication with ALUS

organizers: Participants found it easy and helpful, whereas non-participants were not all as assured that communication would be easy and helpful.

One area that the non-participants pinpointed as a contributing element to confusion in communication with ALUS organizers, was the management of tenant-landlord relations with respect to the pilot project. One non-participant remarked, "the problem is I can talk to ALUS, and then I talk to someone who represents the tenant who is using my land. And, well, he doesn't drive the tractor, it's some guy from Mexico. And he just gets told to go down to that farm and plant that 40-acre field in corn. Somewhere along the line, the communication breaks down, and it not only gets planted, it gets sprayed for weeds and everything else. Well, there goes your prairie grass." This particular non-participant was confused about where he stood within the pilot project. He had been an ALUS participant, but "it just didn't work." He attributes this confusion to a communication breakdown between him (the landowner), his tenant and ALUS. For other non-participants, their tenant would not participate, so they simply could not participate. One non-participant explained, "The person I am renting to would never go for ALUS, for ever one drilled seed. I don't disagree with ALUS in principle, I just don't want to rent the land out [to ALUS] if I'm not the one using it."

In comparing the differences in views between the two groups, it became apparent that communication was an encouragement, and replete with positive experiences for the participants, while it seemed to be a discouragement for the non-participants.

6.4.2 Fears of Increased Liability and Regulatory Interference

"I see [the ALUS] program as removing fear. You do something positive and you get rewarded for it. You are no longer fearful that positive actions will be punished."
- ALUS Participant

"Fear defines what we do everyday… we can put up signs, and we can pay due diligence, and pay a fortune for liability insurance… but there are still things that can go wrong."

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One persistent fear amongst the non-participants was concerning potential government land-use regulation that they perceived could go along with participation in the ALUS program. This went hand in hand with perceptions about the role of government in ALUS programming. An example of this fear was expressed by a non-participant, "If you are bettering society, and government gives you money for it, my concern would be that a level of government would… be telling you what to do with the rest of your land." Another non-participant added, "I won't want anybody trotting onto my farm and saying well, that's nice, but now you can't do this…" These perceptions of government land-use regulation were more strongly stated amongst non-participants than the participants in the ALUS program.

For the non-participants, this fear of governmental interference with land use was appended to concerns about potential liability issues that could come with signing onto ALUS. They discussed how this was a factor that discouraged them from participating. One non-participant explained, "they [farmers] don't want a lot of people prancing all over their farm. They're very concerned about liability. 'Cause if they trip and fall, it's our fault, even if they weren't invited onto the property." This concern seemed to stem from the separation between funding sources, and who has the rights to access the land. For example, one non-participant asked, "if society pays, then do they have the right to play on our land like a playground? Use it as their own property cause they paid for it?" Some non-participants in the group suggested that they might reconsider if there wasn't any liability attached to joining. Since this added liability from joining onto ALUS seems to be a non-truth, as there are not actually additional liabilities that private landowners would be burdened with in participating in ALUS, this barrier to

participation could be removed by re-assurances from ALUS representatives about the lack of liabilities that come with signing onto ALUS.

Participants sometimes mentioned concerns about liability issues that come along with ALUS. When one participant did bring it up, it was to point out how ALUS is important because, in their view, farmers are able to carry out environmental initiatives on their lands, without losing the rights to their land. One participating farmer contrasted ALUS with government programs, and noted that in some of these programs "you cannot use land or gain anything from the lost opportunity costs of this land. Then, you are just losing the rights to your land." Another element that was not abundantly discussed in the participant group was fear. When the participants did discuss an idea of fear, ALUS was perceived as an agent that took fear out of joining onto agricultural-environmental programs. For example, one participant said, "I see [the ALUS] program as removing fear. You do something positive and you get rewarded for it. You are no longer fearful that positive actions will be punished." ALUS, then, has the potential to alter the way that farmers perceive environmental programs. Instead of having a program based out of regulation and fear, ALUS has the ability to have their program be concerned with the promotion of environmental goods and rewarding the landowner. From comments in the participant group, this change in strategy and focus would be well received amongst farmers as the providers of environmental goods. For ALUS participants, fears of liability and government interference seemed to be a non-issue, whereas non-participants spoke of these as a barrier to participation.

6.4.3 Simplicity and Ease of ALUS Process
"With ALUS, it's easy to get things done."
- ALUS Participant

"What makes a program good is simplicity."
- ALUS Non-Participant

A theme that came up consistently throughout the participant focus group was their perception that ALUS was an easy and simple program. For example, participants remarked, "With ALUS, it's easy to get things done," and "I didn't have to go through handstands to have questions answered. The funding came to me in a streamlined way, and so did the ideas." They noted some of the aspects that made it simple were how fast they could get things projects completed, and the fact that there was assistance and back-up for questions or concerns. They considered ALUS to be user-friendly, and considered this to be an encouragement for joining.

In both focus groups, ALUS was contrasted with the Environmental Farm Plan, in terms of its perceived simplicity. Both groups came to a similar conclusion, which was in their experiences, ALUS seemed to be a simpler and more flexible program. One participant noted, "with the EFP, there is more paperwork, more signing, and it is generally less accessible. ALUS, for me, is the opposite, less paperwork, less signing. And it is less theoretical." Some participants go as far as to say that to them, the fact that participants have to sign up for the EFP to join into ALUS is seen as a detractor to the ALUS program. "The EFP takes up too much time jumping through hoops, doing unimportant things. EFP is the downfall of the ALUS program, there are too many barriers built into the EFP."

Non-participants also remarked about the complexity of environmental programming offered through the government. About the EFP, one non-participant commented, "We don't understand it, even though they have someone who's job it is to put it into common English, clear, plain language. It's a complexity issue. We used to have a program a few years ago that was simple. Now we simply don't understand the program we're supposed to be participating in. This lack of understanding it a barrier to the EFP for farmers." Another non-participant spoke to

his experiences with government programming; he said, "most programs aren't good. What makes a program good is simplicity."

Participants have certainly found ALUS to be a simple and supportive program. Even non-participants recognized this as a strength of ALUS. Although they identified this as encouragement to participate in ALUS, this variable alone was obviously not strong enough to motivate them to join.

6.4.4 ALUS' Disconnect from Government Programs

> *"ALUS has a different agenda than... government ministries. They are an arm's length away. You can rely on what they say without thinking about big brother behind his shoulder."*
> *- ALUS Participant*

> *"Farmers are a royal pain in the butt for government. They really don't care, because we don't have enough clout to matter."*
> *- ALUS Non-Participant*

In the non-participant focus group, many group members spoke of ALUS as if it were a government-run program, especially in the first half of the focus group meeting. At one point, someone asked for clarification, and the moderator explained that ALUS was not, in fact, a government-run program. Despite this clarification, the distinction between a government-run program, versus an independently-run program with government funding, was a difficult concept to distinguish for some non-participants. For example, one non-participant said, "If you are bettering society, and government gives you money for it, my concern would be that a level of government would be telling you what to do with the rest of your land." There was also the fear that restrictive regulation will be placed upon them if they sign up; as one non-participant said, "do you open yourself to even more of the government telling you what to do if you sign up?"

The participants seemed to be clearer on the separation between ALUS and the government. This is probably because many of the participants also become much more involved

in understanding the ALUS concept, by virtue of its participatory process. One participant describes ALUS as being different from the government, as "they add to our property instead of interfering with the business side of it." Some participants explained what it was about ALUS' actions and behaviour that separated them from government, as noted in the first opening quote of this section. One participant explained, "what's nice about ALUS is they ask before they come onto your land. They don't just show up and demand things of you." Another participant said, "they don't act as government people, they act as people from the land." Another participant added, "I didn't feel like there was a bureaucrat at my door. Our interaction was genuine." Another added a distinction between ALUS representatives and government officials, "they are not there to push you around, they are there to help you."

Some non-participants shared their experiences with government-mandated on-farm governmental programming. One non-participant said: "I get a letter in the mail that says it's going to cost me X number of dollars, and we're going to come in and do this, and I can't say a damn thing! It's my farm, I pay the taxes! But they're going to go in and do whatever the hell they want." Another non-participant shared a story about when a government official came by his farm with large equipment to clean up the drain on his property. He repeated their conversation as follows:

Non-participant: "What are you doing?
Government Official: "We're going to clean the ditch up."
NP: "Don't you think you should let us know if you're going to do something?"
GO: "We don't have to"
NP: "Okay thank you very much."

His explanation about this situation is, "the government thinks that they can do what they want, when they want it, and the farmer has nothing to say." Generally, the non-participants characterized issues of government-run programs as having issues of no future, nor follow-up

funding. That is, they perceive government-run programs as a series of programs that come into effect, and do not operate for than a few years.

Participants and non-participants shared their perspectives on government officials. Whether or not they are representative of their feelings of all government officials, there were some strongly worded sentiments about government. For example, one participant explained that her view of government was that they are, "dumb. Really dumb… that's the problem with a lot of the legislation; it's coming out of Toronto or Ottawa. They're urban, they've never been to a farm, they've never smelled what a cow smells like when it shits, or a pig. And they keep telling us what to do." One participant describes his interaction with government officials: "Government wants to shake your hand, then check your place, assign you responsibility, and make you pay for it." These sentiments express a sense of distrust, or defeatism, amongst farmers from both participants and non-participant groups.

Both participants and non-participants perceived agricultural-environmental programming to be overly complex and out of reach for farmers. About these program's organizers, one non-participant said, "their [governmental] programs are so confusing, we don't understand them, so we don't tap into them, then the ministry saves money. They make it so confusing, so we can't figure the damn thing out anyway, and so we don't participate." Participants had negative impressions of government officials and programming as well. A participant explained that in Norfolk County, it seemed to be the impression that, "if government people come onto your land, they are here to punish you." Another participant added, "government people tell you what you will do, there is no cooperation or compensation in these interactions."

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Both participants and non-participants have been, in their wording, "burned before" by government and associated agricultural programming. They characterized this as having programs cease to exist a couple years after they start. The distinction between the two groups was that the participants viewed this as a motivation to join onto ALUS, as an alternative to government programming, whereas the non-participants claimed that this was a hindrance, with those bad experiences still fresh in their minds and associated them with ALUS programming. Non-participants, thus, had tendencies to see ALUS as a government program itself; and their confusion about the distinction between ALUS and government was a barrier to their participation in the ALUS program.

6.4.5 Farm Goals and ALUS Goals

> *"With ALUS, [my objective] is 'what can I do here to maximize the benefits of the land'?'"*
> *- ALUS Participant*

> *"I think that everything ALUS wants to do is excellent, but the approach doesn't necessarily fit with everyone."*
> *- ALUS Non-Participant*

- Time Management and Farm Goals

From discussions in both focus groups, it was apparent that the farmers wanted to make it clear that they had wide-ranging goals that they pursued simultaneously on their farms. To gain an understanding of the goals that were important for both participants and non-participants, I had them select from a list of farm objectives, largely informed by Pannell et al (2006)[7]; these included: wealth and financial security, environmental protection and improvement, to be a well respected member of the community and social approval, personal integrity and high ethical standards, balance of work and lifestyle, to survive and grow, to farm well and be recognized for

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[7] This list of ALUS goals is included in Appendix C.

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this, to improve the physical state and appearance of the farm, to earn enough profit to be able to improve and develop the farm, and to have good quality animals and crops.

Most farmers selected all of these as part of their farm goals, while a few only selected some of the goals on the list. One participant pointed out, "people who don't farm can't begin to comprehend the amount of paperwork that is included. There are not enough hours in the day, and it doesn't matter what time of year it is. Paperwork just isn't the priority of my concerns." The major point that came out of the discussion that followed is that farmers are busy people that need to manage the time and the activities undertaken on their farm.

Another point that came out of the discussions was that ALUS needed to fit in with a farmer's personal goals. Participants generally agreed that ALUS could be seen as helping them in reaching their personal farm goals. Non-participants, however, were not certain that pursuing ALUS could fit in with their other farm objectives. One non-participant said, "I need to do the things that are most important to me, and ALUS, at this time, isn't necessarily one of those things." Another non-participant noted, "I'm not participating because I haven't gotten around to it. And that's not necessarily because I don't like it. But I have to manage my resources, and my resources go where I can make the most money." A non-participant summarized his view of the ALUS approach: "I think that everything ALUS wants to do is excellent, but the approach doesn't necessarily fit with everyone." This addressed a particular view expressed by some of the non-participant group, which was the belief that ALUS fit certain types of farms better, for example cattle farms and greenhouses. More so, some non-participants believed that ALUS was particularly not suited for their farm type. For example, there were a couple of orchard farmers, who suggested that the ALUS approach is more difficult to implement on orchards than on other farm types. "It's a different situation with orchards. We don't have land to give. We are limited

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because if we have free space, it's only for a very short time. Land doesn't sit empty." A

Christmas tree farmer agreed. Since the ALUS approach is focused on acreage, rather than

ecosystem services provided, it could heavily influence those types of farms that are eligible. As

one non-participant said, "you need to have land available for alternative uses." A couple of

different implications could come out of this finding. Either, this could suggest that ALUS might

have a higher rate of participation if they targeted certain farm types that are more suited to the

projects that ALUS completes on farms. Or, alternatively, ALUS could ensure in its marketing

that they specify that they have projects for any type of farm, as well as ensure that their

principles and communications are meaningful and applicable to all farm types.

- Ownership of EG&S projects

ALUS participants seemed to embrace ALUS' goals, and pursue them as if they were

their own on their farms. They felt that the ALUS program built upon the skills that they already

had, but took them in a different direction than traditional farming practises. One of ALUS'

assertions is that participating farmers take ownership of the EG&S projects that they implement

on their farms, because of their heavy involvement throughout the ALUS process. This idea was

generally confirmed in the participant focus group. One participant contrasted ALUS work to

that of the EFP, and demonstrated the type of ownership exhibited by participating farmers:

"With the EFP, it is what hoops do I have to jump through to make money, how can I make

money off of this is the main question in my mind. With ALUS, it is 'what can I do here to

maximize the benefits of the land'?'" With respect to the maintenance of ALUS projects, every

person in the participant group said that they would keep ALUS on their farm if payments stop.

The shared ethos between participating farmers and the ALUS direction was exemplified by one

of the questions asked to both groups; when asked whether the farmers support the principles

behind ALUS: The participating farmers (unanimously) agreed that they do. The non-participants, did not all support the whole set of the principles.

In discussions about the farmers goals and time management, participants suggested that ALUS goals were easily incorporated into their farming regime, whereas non-participants perceived the ALUS program to not align adequately with their farm goals.

6.4.6 Participatory Processes

> *"Farmers are engaged and part of the process."*
> *- ALUS participant, about the ALUS program*

One characteristic of the ALUS program that was discussed only by participants was the inclusion of farmers in its program development and implementation. One participant points out what with ALUS, as opposed to government programs, "farmers are engaged and part of the process." This idea seemed to be even more pertinent when participants were contrasting ALUS methods of approach to those of the government. For example, one participant shared an experience with a water supply enhancement program. He explained, "for this program, they used to send around a constable with sidearms to talk to farmers, and this did not go well. It sends the wrong signal. 'Hi, how are you, I've got a gun, do what I say.' This does not bode well with farmers." They maintained that the ALUS process was very different from experiences such as that, first by its farmer-to-farmer approach, followed by the program itself being steered and maintained by farmers in the community.

6.4.7 Confidence in the ALUS Program

> *"The ALUS program removes fear. You do something positive and get rewarded for it.*
> *You are no longer fearful that positive [environmental] actions will be punished."*
> *– ALUS Participant*

> *"Somebody's going to throw some money at me, I'm gonna [do their program], and then*
> *two years later, I don't know who I'm gonna call… I'm just fed up with these wild and*

wonderful ideas that just disappear into thin air. I'm still here, and I've got to deal with the aftermath."
- ALUS Non-Participant

The non-participants voiced their concern about the future of ALUS. When asked directly about the reasons for which they chose not to participant in ALUS, one non-participant responded that one of the reasons was, "the fact that it was short-term funding. We didn't know if we could get enough funding, it was insecure. I asked myself, do I want to do something and do I want to dedicate part of my farm to ALUS, and then after a few years, have the program disappear, and then what?" Another non-participant suggested that she may be holding out until there have been successes incurred on the part of earlier adopters of ALUS. "If the pilot has been successful, if there are good results, people will be willing to participate. Good experiences makes it easier to trust people, and tells me it's going well." For some, the word 'pilot' put them off of the program. One non-participant was quoted as saying, "as soon as I use the word 'pilot', I think it'll be around for 3 years, and then it'll be over." Non-participants also seemed leery about whether they believed that ALUS would continue to exist even for the short-term future, over the next 10 years. One non-participant expressed his opinion on the topic in noting, "will ALUS be around in the future, the way it is now? I suspect that if it was going to take off, it would've been done by now." They suggested that their belief could be altered if there was change to the funding structure to ensure permanence and longevity in funding sources.

One non-participant expressed his fears for the future in terms of committing to what he views as a permanent change to his land, and not having the support that he needs down the road:

"Somebody's gonna throw some money at me, I'm gonna [do their program], and then 2 years later, I don't know who I'm gonna call. Is this program here when I pass the farm onto my son? My grandson? Because you don't do these things in two years. Those things take decades, but these programs don't last that long. I'm just fed up with these wild and wonderful ideas that just disappear into thin air. I'm still there, and I've got to

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deal with the aftermath… some of these things go on for decades, but I'm on my own when the programs disappear."

It was made clear throughout the non-participant focus group that longevity of the program was important in increasing their confidence in the ALUS program. This confidence was a necessary component for many before they would choose to participate in ALUS in the future.

Participants had a more confident view of the ALUS program, and its future in Norfolk County. Much of their confidence in the program was attributed to the support from the organizers. For example, the availability of continued support was essential to instilling confidence in participants. One participant remarked, "not everything [in terms of growing EG&S] happens in a year." Many of the participants said that they considered the EG&S grown on their farms, and on other ALUS farms, to have high rates of success. The projects successes also seemed to breed confidence in the program itself.

It was apparent from the two focus groups that there were disparate levels of confidence between them; participants expressed much more confidence in ALUS and its longevity, whereas non-participants expressed much less so. It is difficult to say whether this confidence is an encouragement for participation, or whether it is bred by participating in the program and becomes an effect of participation. For example, participants have had many interactions and shared experiences with ALUS representatives, by virtue of participating. Repeated interactions and shared problem solving can lead to confidence building, partially explaining the participant's sentiments expressed in the focus group. But it seems that there was a base level of confidence required for participation in the first place.

6.4.8 Trust

"I felt like I had support from the ALUS program. Not everything happens in a year, but there was help and backup for issues that came up."
- ALUS Participant

"I trusted the organizers and coordinator"
- ALUS Participant

You need to pick people the community knows [to work in ALUS]. When you go on your farm, they know you. Makes a big difference."
- ALUS Non-Participant

Confidence and trust seemed to be two concepts that were discussed interchangeably, and seemed to go hand in hand for participants and non-participants. The participants spoke of ALUS organizers as having a positive reputation in the community. For some, this respect went back in time before ALUS even existed as a pilot in Norfolk. For others, the trustworthy reputations were developed throughout the ALUS process. One participant noted that he knew an ALUS organizer before he interacted with him under the ALUS framework. He had considered him trustworthy beforehand, and respected him as a member of the community. These sentiments continued into their ALUS relationships. This participant noted that the ALUS organizer "was never telling me what to do, or what I'm doing wrong. Our interactions were more about knowledge sharing." Every farmer in the participant group agreed that they trusted the ALUS organizers and coordinator. They referred them as trustworthy individuals, and described some of the characteristics that they believed helped them to form these opinions, which included: "knowledgeable, answering questions," "being experts in the field," "addressing concerns", "having confidence in them," and "knowing the land and understanding the farmer's role within in."

Every participant agreed that they were comfortable having an ALUS associate come onto their farms. For this group, a component to trust development was the nature of the interactions between participants and ALUS representatives. As one participant noted, "the most

important thing was that he [ALUS organizer] had suggestions, not orders." Another participant noted that her comfort in ALUS representatives stemmed from the fact that they didn't dictate the manner in which the farmers should do their farming. She said, "our priorities don't bite each other."

Several participants emphasized the knowledge-component as essential to trust- and confidence-building. One participant considered ALUS organizers to be experts and experienced workers, with a good base of knowledge, and accessible to respond to issues. He explained that this was essential, as "it is important to me that there is help and back-up for issues and problems." Another participant remarked that the ALUS organizers seemed "knowledge, able to answer questions, and good at addressing concerns." Another participant pointed out that ALUS organizers had a good blend of theoretical knowledge, which they demonstrated in their workshops and meetings about ALUS and EG&S, but also had the practical experience from working with the farmers in the community, and going out onto the land to work with the landowners.

Another explanation that was offered for their trust in ALUS, was that the participants feel that ALUS representatives are on their side. One participant remarked, "I feel comfortable sharing [personal information with ALUS] because I know it won't get in the wind." He felt that he can be open and honest with the ALUS personnel, because he believed that this information won't be used against him, or be reported to the government. While ALUS does not have a safe harbour clause built in into its program at the present time, discussions have ensued about this topic in the Partnership Advisory Committee meetings.

Among the non-participants, half of the group considered ALUS representatives to be trustworthy. I had the non-participant group define trustworthiness generally; some of the

attributes they associated with trust were: "someone who is accessible, someone who gets back to you," "subject to scrutiny, accountable," "follows through on what they say," "someone who has a good reputation," and "good and successful experiences shared with that person." While only half considered ALUS representatives to be trustworthy, all non-participants agreed that trust would be absolutely necessary for them to participate in the ALUS program.

When I inquired about whether the trust requirement was something specific about farming, or the ALUS program, one non-participant remarked: "so many people make me nervous who aren't farmers. They are not respectful. They think they're allowed to have opinions on your farming practises. They are too far removed from my life… So I don't tend to trust people the same way that don't do this for a living." The importance of having a farmer-contact for trust-building purposes was discussed in the non-participant group. There were a number of strong opinions about the importance of having a farmer-to-farmer approach, however this was not a subject of consensus amongst the non-participants. Some of the non-participants added a nuance into their views of building trust within agricultural-environmental programming. One non-participating farmer remarked, "you need to pick people the community knows. When you go on your farm, they know you. Makes a big difference." Thus, it is not only the farmer-to-farmer contact that seemed to be pertinent to trust building, from the point of view of some non-participants. It was also having a program being firmly planted within the community. Finally, in a similar vein to confidence building, non-participants suggested that success in the pilot stage builds their trustworthiness in the program. One non-participant explained: "Seeing good experiences makes it easier to trust people." She added that this trust would make it easier for her to participate.

In comparing ideas from the two groups, the non-participants seemed to be more hypothetical in their trust-building assertions, whereas the participants attributed trust-building to real, concrete experiences that they had with ALUS. Both groups had strong views about the importance of trust; both thought that it was an essential component to participation. Confidence and trust seemed to be frequently discussed at the same time, suggesting that building confidence in Norfolk County farmers also builds trust into the relationship.

6.5 Lessons Learned and Conclusions

There were a few major lessons that can be drawn from these focus groups. First, all participants and non-participants knew about ALUS. Both groups had, at least they thought, a good sense of the program. However, there was some confusion, and prevalent non-truths, that were held amongst the non-participants, about the role and implications of the pilot. One way that this misinformation could be addressed is through clarification in communication by the ALUS organizers, addressing the particular issues that were raised in the focus groups. One way in which this could be done, as Bryan Gilvesy, the Partnership Advisory Committee chairman suggested, is by creating a 'Frequently Asked Questions' list that could be distributed to ALUS workshop participants. Another way that this could be addressed is with an expansion of the ALUS principles. From these focus groups, it seemed that fear of added liability, and trust/confidence were two major factors that could either encourage or discourage participation (depending on the sign and strength of this variable). Should this be a desirable pursuit for ALUS organizers, I would recommend two additional principles, which could look something like the following:

1- ALUS will keep personal information confidential. (We are not a government-run organization, and your personal information is safe with us.)

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2- You will not experience increased liabilities by signing up with ALUS. (You will not be put at risk of additional people coming onto your land, and you will not need to purchase additional insurance when you sign up for ALUS.)

There were also certain issues that ALUS should be prepared to address, which could be concerns of both participants and non-participants. The first includes worries about more habitat creation, in terms of the inconveniences that could ensue with additional animals interfering with existing cropland, if EG&S projects on the farm create more habitat. The second includes worries about the longevity of the ALUS program.

Both participants and non-participants observed that the promotion of confidence and trust were very important. ALUS already does this in many ways, including having demonstration farms, having twilight farm tours, publishing success stories, having farmer liaisons in each community, and encouraging and publicizing their collaborative and participatory processes. Additional aspects that ALUS seemed to promote already, that were deemed as important decision-making variables in the focus groups, included emphasizing the simplicity of participation in ALUS, as well as emphasizing the new EG&S projects that ALUS can bring to the farm.

This chapter outlined the motivations for participation in a PEGS program, access to information about ALUS, and farmers' participation decision variables. It highlighted and contrasted the different perspectives that ALUS participants and non-participants had in terms of their adoption decisions. Confidence and trust in ALUS and its organizers seemed to be important decision factors for both participants and non-participants, according to the frequency and emphasis on these variables by both focus groups.

Chapter 7 - Interview Results

Interviews with Policy and Program Administrators

7.1 Introduction

Throughout my research, I have held on-going interviews with ALUS organizers, Conservation Authority Representatives, government officials, EG&S researchers, and farm organization leaders. These interviews were instrumental in testing my conceptual framework (Chapter 4), and for providing insights toward the development of a list of critical success factors for the ALUS approach (Chapter 8). The interviews provided additional sources of information about agricultural-environmental program outreach, extension and delivery. This chapter is organized into observations about factors in delivering ecosystem service programming. For a table of interview participants, and interview guides, please refer to Appendix D.

This section summarizes the most commonly discussed elements of agricultural-environmental programs exposed by my interview participants, in terms of the ALUS pilot's implementation and delivery. The themes discussed in these interviews included: 1- The Sense of Ownership of EG&S projects; 2- Importance of Confidentiality; 3- Program Guidelines; 4- Program Simplicity; 5- Word of Mouth and Program Uptake; 6- Farmer-to-Farmer First Contact; 7- Social Capital; 8- Participatory Processes; 9- Farmer-Led, Farmer-Driven; 10- Program Longevity, Reputation and Trust; 11- One-on-One Assistance; 12- Managing Participants' Expectations; and 13- Capacity. For a summary of these themes, please see Table 7.15.1, at the conclusion of this chapter. The author notes that many of these themes are interrelated; however they were separated as such, as they were discussed as separate phenomena in the interviews.

7.2 Ownership of EG&S Projects on the Farm

The sense of ownership that is felt by participating ALUS farmers in Norfolk County is one area that was perceived as an important attribute of participants in the pilot program. The positive effects of having farmers harbour a sense of ownership of their projects was speculated, amongst interview participants, to result in higher levels of maintenance of projects, and a longer projected time of the EG&S to be sustained on the farm. PEGS practitioners explained their views with respect to their own programming.

Dave Reid, an ALUS organizer and a Ministry of Natural Resources employee, (Sept. 10, 2009, Personal communication) explained that the ALUS approach "allows for a lot of ownership, and a way to capture ingenuity that you won't get from a provincial program or a top down government approach." He elaborated that the ALUS program is adaptive, and able to "capture" the landowner. He views ALUS as giving farmers, as entrepreneurs and stewards, a chance to do the projects that they wanted to do, but were not previously affordable options. Kristen Thompson, the ALUS coordinator (June 4, 2009, Personal communication) added that financial reasons, from her perspective, had been a barrier to implementing EG&S projects for participating farmers, and it was not feasible to take land out of production and put that money in the start up costs for creating a wetland, establishing forest cover, or planting prairie grasses. By aligning ALUS projects with existing personal farm goals, ALUS does not try and take away from a farm operation. Instead, their programs target the stewardship activities that a farmer would have the motivation to upkeep and enhance. The ALUS organizers seemed to be very conscious of not "tricking" landowners into doing anything on their land. Ideally, the landowners desire the land conversions in the first place, and ALUS comes in to act as an enabling mechanisms.

Kristen Thompson (June 4, 2009, Personal communication) explained the role of the coordinator in project selection and implementation, as it relates to project ownership. "When I [as the ALUS coordinator] visit the farm, I direct the project as best I can, but what the farmer wants is the primary directing motive." Thompson acknowledged that different farmers had varying degrees of knowing what they want on their land, and different levels of communicating their personal interests; so, in some cases, she had a more directive role as the coordinator. Thompson maintained that she is advised by creative ideas for EG&S projects that are harmonious with the personal goals of farmers. She emphasized that it was an ALUS priority to do what the landowner wants. She also acknowledged that this brings in an element of complication when there are goals that might clash in selecting ALUS projects. For example, landowners' goals might include having an aesthetically pleasing landscape and easily managed land; as such, there could be some discordance between a restoration point of view and the farmer's point of view. Thompson added that in most cases farmers are open to the types of projects that ALUS tends to provide, and so this discordance has not brought up much concern in the past.

Kristen Thompson (Sept. 16, 2009, Personal communication) also spoke to the sense of ownership component of ALUS, as it relates to project longevity and permanence. She noted that based on her experience engaging with landowners, "I think a lot of our farmers will keep the projects [when the pilot ends], because when people become engaged in ALUS, we really work with them to develop something that they want to see on their farm." She was of the belief that since ALUS feeds into the actions that farmers were interested in anyway, without having it come at a significant cost to them, it can become within their interests to continue to keep them when the pilot program concludes. Steve Scheers, an ALUS organizer and Norfolk County

employee (Sept. 16, 2009, Personal communication) added that it is his belief that "once ALUS is done in Norfolk, I think we're going to find that in those areas where restoration has occurred, they're going to continue to stay, because the landowner has invested in it, he's been sold on it, and I think that they're going to continue to showcase it." He added that when you work with the landowners, you end up taking on projects that stimulate people's interests, projects that local will more likely buy into. As the ALUS approach is still in its pilot phase at the time of this writing, only time will tell whether the organizers' views of participant connectivity come to be true.

Andrew Graham, Program Manager at the Ontario Soil and Crop Improvement Association[8] spoke to this theme as well. He noted, (March 1, 2010, Personal communication) "if you don't understand what was creating the problem in the first place, and why that particular design was chosen… and how that design integrates with your cropping and soil management plans… you're going to be quick to abandon it." He emphasized that there needs to be learning and understanding of why they are implementing the project in the first place, and to do so, there needs to be some stake in the project. Dennis O'Grady, (Oct. 19, 2009, Personal communication) General Manager at the South Nation Conservation Authority, commented on ALUS' ability to encourage farmer ownership of EG&S projects: "The key to success to public participation is that eventually, you want the people to view it as their program. ALUS is good on that level." He was of the belief that perceptions and views of the environment change entirely when local people are put in charge of agricultural-environmental programming, because of what he suggested was a heightened awareness that goes along with the ownership sentiment.

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[8] The Ontario Soil and Crop Improvement Association is the 3rd party organization that delivers the Environmental Farm Plan in Ontario.

7.2.1 Ownership and Project Investment

One point of contention that came up in the interviews on the topic of project ownership was whether farmers would be more likely to keep a given EG&S project for a longer time span if they had directly paid for at least part of the implementation, or whether the conversion costs were completely covered by another source. Tracey Ryan and Anne Loeffler (Feb. 10, 2010, Personal Communication) respectively the Supervisor of Conservation Services and a Conservation Specialist from the Grand River Conservation Authority, were of the opinion that when landowners bought into an EG&S project (even if only partially) they would feel as though they had personally invested in it. They also believed that this would encourage landowners to maintain the projects on their land for a longer time-span. Loeffler (Feb. 10, 2010, Personal Communication) noted, "if there's no financial buy-in on the landowners part, there's no reason for him to take care of it. We're pretty critical of grant programs that offer to pay 100%, for example, of the costs of tree planting… if none of the money came out of your own pocket, you're not going to take care of it when drought hits." The implicit assumption that they are making is that EG&S are inherently different than growing crops or raising livestock on the same acreages of farmland. Loeffler and Ryan also maintained that formal contracts were not a necessity for longevity of the EG&S projects that they put into the ground. Their have informal, non-binding, handshake agreements that the farmers will maintain his or her converted land for 15 years. Similarly, Lilian Scharer (Media Release 2009, page 30), from the Ontario Soil and Crop Improvement Association, claimed that for every dollar a farmer spend on a project, he or she will spend an additional two dollars as an investment in the same project. It was not stated how this figure was calculated.

ALUS organizers, on the other hand, were of the belief that EG&S ought to be completely paid for, both conversion costs and annual payments, so the landowner is not directly paying into these ecosystem functions. They also have a 'fee-for-service' concept, which includes the stipulation that once the farmer decides to remove the EG&S project, the payments end and the contract is broken. It becomes the farmer's responsibility to ensure that their performance meets expectations in order to receive payments.

There is, in fact, an investment made by the landowners in either situation, whether or not they directly pay for the conversion costs. Farmers will always incur maintenance and upkeep costs. And, should they choose to plow under the converted land in the future, they will incur the conversion costs as well. Regardless, representatives from both points of view have stated that their projects encourage landowners to take ownership in their on-farm environmental actions. This point of contention raises the question of what level of formality is required of the contracts, and whether or not direct investment into the project would encourage landowners to maintain the project for a longer period of time. In my opinion, EG&S represent a real cost to the farmer, in terms of both conversion costs, and opportunity costs of land bearing the EG&S. Thus, it is reasonable to consider them as a good/service worthy of payment. I believe program design lies partially in farmers' actual response to incentives provided; if they are willing to provide EG&S without yearly incentive payments, then this would be the less expensive option. If, however, this does not ensure project longevity and maintenance of EG&S areas, then a yearly may be a necessary provision. Finally, I believe that the way in which a sense of ownership in EG&S project are harboured is felt moreso through the project implementation process, rather than whether or not the farmer receives a yearly payment.

7.3 Importance of Confidentiality

Assurance of confidentiality was an important factor in a PEGS program for many of the interview participants. John Clement, general manager of the CFFO (May 27, 2009, Personal communication) suggested that trust is strongly associated with confidentiality. Relatedly, ALUS firmly supports the maintenance of confidentiality of its participants. Dave Reid, an ALUS organizer, said he has made it clear to participants that he is on their side when it comes to confidentiality and liability issues. He has noted on several occasions (including April 7, 2010, Personal communication) that his approach to confidentiality is "see no evil, hear no evil, speak no evil…" He has often said that this type of approach is essential in gaining access to the land that they're working with.

These assurances can build trust amongst landowners, especially in a culture of distrust of program organizer's intentions. Bryan Gilvesy, ALUS organizer and Partnership Advisory Committee Chairman, remarked (Sept 16, 2009, Personal communication) that he believes "there is tremendous distrust" toward government officials within Norfolk County. An example that has occurred recently was the release of the Species at Risk Legislation and the reaction from the farming community. From speaking with landowners in Norfolk, it has been expressed that some of them feel that this policy targets their land practises in a restrictive manner. Because of this, and other regulatory restrictions, ALUS works within a realm where they have to be careful about ensuring that farmer confidentiality will remain an important facet of their programming. The concept of a safe harbour clause has been discussed quite frequently at recent PAC meetings (in 2010). This clause would entail protecting a farmer from liability issues that might arise due to other regulations, because of actions taken under the ALUS project. The Grand River Conservation Authority also stressed confidentiality in their delivery EG&S to private

landowners in their watershed, suggesting it was of upmost importance to their programming. This theme emerged as a critical success factor for ALUS, and is discussed more thoroughly in Chapter 8.

7.4 Program Guidelines

There were differences among different PEGS practitioners and observers, in terms of their views on the importance of guidelines, in rigidity and strictness. ALUS has a couple of guidelines that direct their programming. Participants must have a registered farm number, or at least be in the process of getting one. Also, landowners must not exceed 20% of their cultivated land for enrolment in ALUS. The payments that landowners receive are an average land rental rate per acre, which are determined by measurements of areas converted to EG&S land on the farm. However, ALUS' guidelines are purposefully kept more interpretive and open for discussion. Bryan Gilvesy (ALUS participant and PAC chairman) commented on this issue; "when we talk to some bureaucrats, they want to know what your Best Management Practises are. We say we don't have a list, because we want to foster some creativity. We want to make sure it works for the farmer." The fostering of creativity and collaboration with the landowner, from the viewpoint of ALUS organizers, requires some flexibility and openness in their approach, which can be an antithesis to guidelines and structure. Moreover, at a recent PAC meeting (April 7, 2010), these two guidelines were called into question. It was determined at this meeting that exceptions would be considered for both of these guidelines, which speaks to the lax and interpretive nature of the guidelines that direct the ALUS approach.

Gilvesy (Sept 16, 2009, Personal communication) explained the guidelines as residing within the mind of one key organizer: "Dave is the conscience of our program, he's the guy we go to for the official rules… Dave comes back and says [whether the proposed actions] fit within

the guidelines." These types of guidelines applied to the duplication of the ALUS model across different landscapes in Ontario and Canada. In a specific instance, Bryan was referring to an extension of the ALUS instrument to an area in Toronto called Rouge Park. He asserted that it would be considered an ALUS-type program provided that they stayed within the limits of the ALUS guidelines and principles. ALUS' interpretive guidelines can be both a strength and a weakness to their programming; on the one hand, the absence of strictly enforced rules can allow for more landowner creativity and inclusivity. On the other hand, it has the potential to obfuscate the program's intended activities, and can confuse potential participants in terms of who is eligible for ALUS.

In stark contrast to this modus operandi, a number of interview participants stressed the essentiality of guidelines in creating and delivering EG&S programs. Tracey Ryan, from the Grand River Conservation Authority, noted that having guidelines was critical for the efficient and equitable functioning of their programming. She noted, (Feb. 10, 2010, Personal communication) "having guidelines, a document that could guide us, terms of reference for the committee, and a document that says what's eligible and what's not… these were critical factors for having a level playing field." Guidelines, then, are helpful for making a program easily accessible to all eligible participants. She explained that having these guidelines was indispensable for three groups of stakeholders: the landowners who are applying to their programming, for the staff who are administering the projects, and for the review committee who need a decision-making structure. Having guidelines for the Grand River Conservation Authority's projects also allowed for useful comparison and evaluation across projects.

Anne Loeffler, also from the Grand River Conservation Authority, agreed that good guidelines were very important for a smoothly functioning program; she said (Feb. 10, 2010,

Personal communication), "the most important thing for people to deliver a good grant program, a good incentive program, is to have strong guidelines." Loeffler thought that having clear guidelines was essential to successful programming. She elaborated by making a statement about the ALUS model, in commenting that she had once inquired about the ALUS guidelines, and their reply was: "No, we don't have guidelines, we have great ideas." Anne noted that she doesn't believe that this approach can work on a larger scale, because guidelines dictate what the requirements for program qualification are. She said that in her 20+ years of running agricultural-environmental programming, "you'd be amazed at how many shades of grey you can run into." In her opinion, guidelines help define these areas, and assist in organization and placing participants within their programming. Some of the benefits that she noted of having guidelines included: it makes the job of managing applications easier and more clearly defined, it is easier to defend the projects that are done, it prevents landowners from slipping in something that isn't within the realm of permissible projects, it gives direction on what you want to achieve, and it makes you think very carefully about what exactly it is you want to achieve.

It was clear that there were differences in opinions about the importance of having guidelines directing the EG&S projects and programming. I think their necessity depends on both the objective(s) of the programming, and the intended sources of funding. The idea of different PEGS program objectives is explored further in Chapter 8.

7.5 Program Simplicity

The importance of having a simple program was a repeated theme throughout the interviews I did with EG&S program practitioners. In particular, both ALUS, and the Grand River Conservation Authority have prided themselves on their simple programming: they all

emphasized using a streamlined process, with a one-page application process, and the payment opportunities for farmers are presented in a straightforward fashion.

The Grand River Conservation Authority learned from their farmer committees that offering simple projects would enhance adoption rates among farmers. In suggesting alternative program designs, the farmers repeatedly informed the organizers at the Conservation Authority that they wanted a program in terms that they were familiar with, so that they can more easily make the decision of whether or not a program is appropriate on their land. Anne Loeffler (Feb. 10, 2010, Personal communication), from the Grand River Conservation Authority, noted that additional elements that contribute to the simplicity component of designing and delivering a program include being clear and straightforward about what the program's objectives are, and what the program can do for the farmers.

Both ALUS and the Ontario Soil and Crop Improvement Association maintain simplicity in a several ways. The people who host the workshops are the same people who deliver the projects, and make the payments to the farmers, so there is one point of contact with whom to direct questions or concerns. Both ALUS and OSCIA act as brokers of agricultural-environmental programs, in that they alert farmers to opportunities in which they are eligible to participate. All three organizations discussed above stated that simplicity was an important attribute to the application process and delivery of their programming.

7.6 Word of Mouth and Program Uptake

ALUS has experienced a steady increase in uptake over the years of the pilot, with 21 participants in the first year, 32 additional in the second and another 40 participants in the third year of the pilot. Kristen Thompson observed, however, that securing uptake was difficult, in terms of accessing farmers in the community. Though it can take time to reach them, she

observed (June 4, 2009, Personal communication) that neighbours help a lot in the communication element of ALUS marketing. She remarked that it was her perspective that a lot of the promotion for ALUS programming was done through word of mouth. Steve Scheers, an ALUS organizer added (Sept. 16, 2009, Personal communication), "If you show 10 farmers about ALUS, they are going to tell 10 more farmers what they saw, and then it spreads by word of mouth and continues to multiply…" Steve also remarked that ALUS had the opportunity to reach a subset of farmers that resource managers had struggled to reach in the past. He noted, "the acceptance by the rural community we'll find it is stronger in those communities that, as resource managers, we have struggled with, in regards to 'it's my land, back off' type of thing… ALUS has the opportunity to engage the farming community one-to-one, and it's not somebody telling you or requiring you do so something." He added (April 7, 2010, PAC Meeting) that it is worth it for ALUS to spend the time reaching these farmers, because it will help ALUS achieve its participation and acreage goals, as well as allow it to reach previously inaccessible farmers and farmland.

In order to have a successful program, farmer uptake is required. In ALUS' case, uptake has consisted of engaging the farming communities. One way that they have accomplished their task is through the use of existing social networks. They engaged farmers that are known in the community to make the first contact with potential ALUS participants. This process is termed 'farmer-to-farmer', and is described in the following section.

7.7 Farmer-to-Farmer First Contact

When ALUS officials use the term 'farmer-to-farmer', they are referring to the first-approach in the recruitment of farmers as new participants. In the past, ALUS has used a targeted approach, where they send farmer liaisons, sometimes in conjunction with the coordinator, out to

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farmer's lands that are targeted for ecosystem service projects because of their location, or other ecological attributes. Any interested farmers are then invited to submit an expression of interest, beginning the ALUS participation process. They have also conducted workshops in different areas of the farming community, to recruit new participants for the given planting season. A local farmer chaired these workshops, and farmer liaisons spoke to their experiences with ALUS at these workshops. The farmer-to-farmer liaison plays a role for more than just the initial marketing period; they remain in place as a link between program participants and organizers for the duration of the farmer's participation in ALUS.

Dave Reid (Jan 27, 2010, Personal communication) explained how the farmer-to-farmer first contact approach was initiated, "A number of farmers on our [stewardship] council, and on the PAC, were familiar with the area, and they offered to make the first approach... The idea was it was literally a farmer, phoning you up." He went on to explain that this was different than applying to a set program, even if there is a farmer review panel. Instead, it was one farmer within a given community, approaching his peer/fellow community member and engaging in a personal discussion. Right from the initial stages, Dave believed that their process is differentiated from other delivery agents of agricultural-environmental programs. Bryan Gilvesy (Sept. 16, 2009, Personal communication) summarized his view of the benefits of the farmer-to-farmer approach within ALUS; he noted "I was able to call a friend and ask if there was a way I could fit into this program. Without any exposure, without opening my books… it was a very comfortable experience." He suggested that using the farmer-to-farmer approach promoted comfort and trust amongst the potential ALUS participants.

Another way in which the ALUS program is farmer-to-farmer is that they contract the planting work to a local farmer in the community. Steve Scheers (Sept. 16, 2009, Personal

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communication) believed that this engages the agricultural community. He noted, "This year, we hired a farmer to do that planting [and seeding]. Even if a person has a farm background, it's different if they're a farmer." He also mentioned that farm children have assisted with growing ALUS, through the Norfolk Environmental Stewardship Team program. They were 17-year olds from the community interested in a career in Natural Resources. They did restoration work and assisted with ALUS projects. Dave Reid (June 4, 2009, Personal communication) explained that they are useful in helping with extension and delivery, and they were easy to fundraise for. Moreover, they helped fill in for capacity that might be lacking in extension projects. This is yet another way in which the ALUS program engaged the local community.

The selection criterion for choosing the farmer liaisons was that they either lived in or knew people in the area in which they are targeting. ALUS organizers (for example: Kristen, Sept 16, 2009, Personal communication) referred to the farmer liaison's work as a "soft sell." In selecting farmer liaisons, Dennis O'Grady (Oct. 19, 2009, Personal communication) noted similar selection criterion for choosing farmer liaisons. He noted the importance of selecting farmers that are from the area they are working within. Dennis said that this offers them "instant credibility."

At a recent Partnership Advisory Committee meeting on April 7, 2010, there was a motion to re-instate farmer-to-farmer targeting, over and beyond their usual annual workshops. There was agreement from the PAC that this would be a good step to promoting their program amongst the target groups, that it could strengthen their message. Tristan Knight (June 14, 2009, Personal communication) outlined a few reasons for which using a farmer-to-farmer outreach process is beneficial. These included: "Cheaper… trust-inducing, [working off of existing] friendship, [believing] that they will not go and report them to the Ministry of the Environment,

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working with them to solve problems, accountability, and knowing what is at stake, what they could lose, and will take their issues seriously." Additional benefits can include: increasing credibility, and making use of people who speak the same language as the targeted participants. This farmer-to-farmer approach can be considered as making use of the networks and social capital that existed in the community prior to the introduction of ALUS. This idea is elaborated in the following section.

7.8 Social Capital

Andrew Graham, (March 1, 2010, Personal communication) from the Ontario Soil and Crop Association, described his experiences working for the provincial government compared to working for soil and crop, with respect to farmer reception: "The huge difference is, it's no longer a faceless, nameless government guy who sits in the local office… the people who are delivering the program is the farmer down the road, who's been known in the county, who's family had been known in the county, who's been coming out to all the soil and crop meetings, as well as the cattlemen, the corn producers, because that's what they've done for generations." He asserted that once it is known that it is this community member who is delivering a program, there is instant credibility given to them by other members of the community. He added that farmers are, "more apt to pull the strings on some faceless, nameless person in a government office than somebody who you're gonna see at church, and the bowling alley, at the dinner at Christmas… there just isn't the same number of challenges at all." It is precisely in this way that social capital can act as a lubricant to put effective programs into place in the community. Capitalizing on existing social networks can minimize challenges, while extending the reach that a program can have over the community.

Social capital can also establish accountability within an agricultural-environmental program. This is because in any PEGS program, there is only a given amount of funding for EG&S payments, and it follows that there may not be enough for everyone. The effective distribution of these dollars can be a reflection of the farmer liaisons doing their jobs well, as applications are honoured on a first-come, first-serve basis. If these people are known in the community, these social ties can act as reinforcement or encouragement for ensuring that their jobs are being done well. Andrew Graham (March 1, Personal communication) agreed to this point: "if you're not doing your job as program representative in a timely and efficient manner, you're gonna catch it from the local people who all know who you are." Thus, incorporating existing social ties into the delivery of EG&S programming has the potential to greatly assist the efficacy of the program. This concept is discussed in more theoretical detail in Chapter 8.

7.9 Participatory Processes

ALUS engaged the community in both the conceptualization and the delivery of the pilot program. As Kristen Thompson (June 4, 2009, Personal communication) explained, what the farmers want on the farm is the primary directing motive for ALUS programming. It is also important, according to Thompson, that the farmers enjoy the work as well; their creative energy is imperative to the project's success in the long run. Tristan Knight (June 14, 2009, Personal communication), an EG&S researcher, views ALUS as a "consensus-drive process," noting that committee groups with stakeholders are essential to the success of ALUS, in his opinion.

Bryan Gilvesy (Sept 16, 2009, Personal communication) described the ALUS process as "the mechanism to influence the private landowner." He further explained that what he means when he describes ALUS is not just the incentive payments, but "the whole mechanism: from the farmer-to-farmer contact, through to the technical expertise, through to the planting, and through

engaging the farmer to do the maintenance and site prep[aration]." He described ALUS in terms of its participatory processes, in that they are inseparable from one another. Dave Reid (Sept 10, 2009, Personal communication) explained that his vision for the ALUS approach is "the local, less formal route of the community deciding what the issues are." Achieving this vision included, building and delivering the program in coordination with the members of the community who utilized the program, which can bring legitimacy and relevance to their programming.

Kristen Thompson (Sept 16, 2009, Personal communication) explained that the essence of ALUS was that it is within the control of the farming community. She said "the most important thing is that you have to remember the key principles of ALUS, that being that it's farmer-led and farmer driven… so the project always has to be something that the farmer is happy and satisfied with. You're always trying to merge those two major interests." Dave Reid (Jan 27, 2010, Personal communication) added to this idea; he noted "we try and ensure that our policy decisions are made by the PAC, and we try to ensure that the PAC is heavily weighted by farmers." This allows ALUS to capture farmer priority setting quite well; the idea with respect to environmental priority setting is that farmers know the ecologically sensitive areas on their land most familiarly. Thus, their input can be key directive for targeting ecologically sensitive areas.

ALUS had learned about the successes that had stemmed from implementing participatory processes in other programs that had been done in Norfolk County in the past. Steve Scheers (Sept, 16, 2009, Personal communication) said that he believes that ALUS does capitalize on their place within the community. He noted, "Dave [Reid, ALUS organizer] takes advantage of the fact that he's a local boy, and knows the interests in the community." He believes that the agricultural community has been engaged in regards to the delivery of the project.

Other EG&S practitioners that I interviewed agreed with the importance of participatory processes in program conceptualization and delivery. Dennis O'Grady, from South Nation Conservation Authority (Oct. 19, 2009, Personal communication) commented upon participatory processes. He said, "If you put a group of individuals truly in charge of a project, that means they've got policy responsibility, funding responsibility, accountability for what goes on... If something goes wrong, there is no one else to blame." He suggests here participatory processes enhance farmers' decision-making abilities (with the additional information that they have from being part of the planning process) and the implications of those decisions (because the decisions they make affect themselves and their neighbours.) Andrew Graham, (March 1, 2010, Personal communication) from the Ontario Soil and Crop Improvement Association, brought up ownership in the sense that program representatives can also have a sense of ownership about the program which they are selling, which helps to encourage farmers to sign on. "When you've been able to hold onto so many good people for so many years, and still be enthusiastic for an opportunity to get onto the next program… they all take an incredible about of ownership too. That's a big part of local success, is the credibility of soil and crop." He suggested that putting local people in charge develops credibility, by developing trust and expertise collaboratively with the community.

Tracey Ryan, from the Grand River Conservation Authority, agreed with the importance of participatory processes. She noted (Feb 10, 2010, Personal communication) that when Grand River commenced the planning of their agricultural-environmental programming, they "started on the basis that everyone needs to be at the table." She also explained how it was the participatory processes that engendered trust on both sides of the transaction. She also noted, "if the municipalities were putting up this funding, they wanted a party that could be a go-between:

between the municipalities and the between the farmer." The Grand River Conservation

Authority acted as that go-between through the many committees and participatory processes

that they used in their programming. Anne Loeffler, also from the Grand River Conservation

Authority, attributed beneficial spillovers from undertaking participatory processes with respect

to building a program. She noted (Feb 10, 2010, Personal communication), "the process of over a

year of building consensus is what formed the partnership, and what formed the really strong

relationships between the region and us and the farmers. It creates trust." Andrew Graham

(March 1, 2010, Personal communication) also spoke to the importance of utilizing participatory

processes at the Ontario Soil and Crop Improvement Association. He explained, "For all the time

that we've gotten into the environmental program, we've always maintained… clubs at the local

level, comprised of volunteers with common interests, who pursue projects, pursue ideas. So that

kind of enthusiasm fuels the organization…" The fact that both the Grand River Conservation

Authority and OSCIA put policy and financial decisions entirely within the hands of their

farmer-led boards demonstrates their belief in participatory processes in their programming. This

is a point of similarity between these agricultural-environmental delivery agents.

7.10 Farmer-Led, Farmer-Driven

The farmer-directed approach means that ALUS doesn't have a set list of Best

Management Practises within their program operations. Gilvesy (Sept. 16, 2009, Personal

communication) explained that this is because they want to foster creative solutions amongst

their participants, and that it will work for them on a practical level. "We don't force the projects

down the farmer's throat." He also observed that they end up coming back to the same five or six

project types. Another way in which ALUS is different/participatory is in the way in which

projects are designed and implemented. Bryan observed that "I get introduced to the technical

people, and they don't walk onto my farm with a list of Best Management Practises. They walk onto my farm with an open mind, saying, 'what will work for you, what will help your farm, what will help you be more sustainable.' To me, that's a very important thing." The farmer-led, farmer-driven approach is essentially the same idea as utilizing participatory practises; however, in ALUS' case, it can be used as a selling point, and a more descriptive summary of what it is that their program aspires to follow.

7.11 Program Longevity, Reputation and Trust

When I discussed trust-building with EG&S practitioners, one element that was emphasized was the considerable amount of time can take, especially within the farming community. Anne Loeffler, (Grand River Conservation Authority, Feb. 10, 2010, Personal communication) observed that amongst the landowners that she has worked with, the perceived longevity of a program was an important variable for the trust building process. She also noted that, in her opinion, the critical success factors for running and delivering an agri-environmental program include "longevity, delivering what you promised, being very clear and straightforward about what your objectives are… simplicity, and honesty." She spoke at length about these factors, a few of which I will touch on in this section.

Anne Loeffler explained the length of time required for building trust in the communities in which she works, "If you can have a non-confrontational conversation with someone, and even if they can just see you do 5 different presentations over 10 years in different meetings… With time, they develop trust. We have people absolutely trust us." Andrew Graham, from the Ontario Soil and Crop Improvement Association, also associated program longevity with high comfort levels of the local farmers and accountability. He also added another point about trust building, which was the importance of reputations of the program representatives. He (Andrew

Graham, March 1, 2010, Personal communication) described the reputation of the farmer

program representatives, "They have an incredible knowledge built up of who's who around the

county, and all the different sectors. And that greatly benefits the reputation of our association."

Graham believed, as did Tracey Ryan and Anne Loeffler from the Grand River Conservation

Authority, that their organizations have earned a positive and successful reputation. They pointed

to factors such as increased participation over time, and the longevity of individual participants

as positive perceptions held amongst landowners.

Bryan Gilvesy spoke to the trust building that occurs in ALUS. He often refers to his own

experiences, of transitioning from not trusting, or being comfortable with any program

organizers coming onto his property, to being the chairman and spokesperson of the ALUS

program. Gilvesy noted (Sept 16, 2010, Personal communication), "having someone from the

agency [that you're dealing with; in this case ALUS] walking on your land that appears to have

your interests at heart too, and that's a sea change." He believed that the ALUS process builds

trust between landowners and project organizers.

It was generally acknowledged, by ALUS, other organizations and Conservation

Authorities, that certain types of EG&S projects lend themselves better to permanence. Wetlands

and tree planting, for example, are more difficult to remove, especially after they have been on

the ground for a few years time. The longevity, or permanence, of any given project is thus

dependent on a number of factors, including both physical/financial factors (costliness of

conversion) and perceptions of the program's reputation and longevity.

7.12 One-on-One Assistance

ALUS organizers acted as both technical specialists and delivery agents in their EG&S

programming. They made use of Conservation Authorities, NGOs, and their own knowledge as

sources of technical information. They gave farmers access to trained specialists who come out to the farm, and provide one-on-one assistance. Steve Scheers' (Sept. 16, 2009, Personal communication) reasoned that "if people don't have that guidance at the critical time… then a lot can be lost." All of the projects planted on farmers' lands were an investment, and from the ALUS perspective, guidance and re-assurances of what is normal was a necessary component to their programming. Also, according to Scheers, having this one-on-one assistance changed the tone of agri-environemntal programming from "this is the best practise" to "this is the best practise for these types of lands in these types of situations."

ALUS has the potential fill a gap in one-on-one assistance, from an extension model that was abandoned by the provincial government a few decades ago. The Ontario Ministry of Agriculture, Food and Rural Affairs used to provide one-on-one extension services, but they moved away from that model in the 1980s. According to Andrew Graham (March 1, 2010, Personal communication), there were significant changes in the way that the Ministry operated in that their business model no longer involved that type of personal, on-site assistance. He explained, "[This change was] not because it's not appreciated by the farmers. But there aren't the budgets in place to support the number of people you need to service that particular model." On this point, Steve Scheers noted (Sept. 16, 2009, Personal communication) "the government, for years, was actively rowing the boat and helping to engage in the community… and we were always told that when the Ministry of Natural Resources started to downsize, that we didn't row the boat any more, we just steer." By this, he meant that instead of providing extension services, the government took a less-active role, and instead provided the funding and direction of environmental programming, leaving the implementation to third party organizations.

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Scheers viewed ALUS as an effective approach to get funding out to the farmers, in the pursuit of goals of preserving or conserving the natural landscape. He added that the community is poised to accept these services. "The result [of no longer having extension services] is that local communities react, and build capacity." He offered the Woodlot Association in Norfolk County as an example of the community coming together dealing with a perceived issue on using their own resources.

This one-on-one assistance distinguished ALUS from some other agricultural-environmental programming that is currently in place in Ontario. Andrew Graham (March 1, 2010, Personal communication) made it clear that the Ontario Soil and Crop Improvement Association is not in the business of one-on-one extension, in the way that ALUS has provided. "We are not extension specialists, that is left up to the provincial folks. But we're the delivery agents." He explained that instead, they've chosen to use "workshops, seminars, and the development of a lot of literature," as their extension. Part of this movement away from one-on-one assistance involved taking on 3rd party delivery, explained Andrew, so as to reduce costs and management time, while retaining responsibility for delivery. In this way, explained Andrew, "the ALUS model is turning the clock back a little bit." But Andrew does concede that what they are doing is "wonderful."

7.13 Managing Participants' Expectations

ALUS organizers realize the importance of good communication with their participants. One way in which they ensure communication is on-going and clear is through demonstration farm tours, which they call 'twilight tours,' with farmers in the community. They host these tours in the evenings, targeting the farming community that works from dawn until dusk. They hold them periodically, taking farmers to demonstration farms. The purpose is to enable social

networking and social learning amongst their participants, and to ensure they are addressing expectations management when it comes to growing EG&S on the farm. Steve Scheers (Sept. 16, 2009, Personal communication) explained, "landowners desperately seek guidance to do the right thing. They don't need to be told what to do, but they need to understand what they need to do." He suggested the twilight tours are the remedy for this. He elaborates that the tours promote the type of dialogue that is constructive and useful at every stage of the EG&S growing process. John Clement of the CFFO appreciated the usefulness of the twilight tours. He (May 27, 2009, Personal communication) pointed to the power of speaking to what farmers see and know on their own farms; having the twilight tours allows other farmers to relate to experiences of participating ALUS farmers.

Having these twilight tours was especially pertinent to the types of projects that ALUS typically grows. Dave Reid (Sept 10, 2009, Personal communication) pointed out, "we recognized early on, particularly with the tall grass prairie, that we needed to manage farmer's expectation, because it takes $2 - 3$ years to get it successfully established, and they may disc it under before realizing it still [has potential to be] a success. So the twilight tours started to manage those expectations, and try and encourage networking amongst participants, so that they can learn from each other." Steve Scheers (Sept. 16, 2009, Personal Commuication) elaborated on the expectations management element of the twilight tours, "I think the biggest [purpose] is… that there is an attachment and an expectation of what effort should result in, and what the [EG&S] land should look like. One of the hurdles that we face with prairie is that in the first couple of years it doesn't look like prairie." He further explained that is it his belief that this type of crop can be particularly troubling for farmers in this area. Steve explained that there is a strong European ethnic background in the county, which influences an ethic of appreciating

"neat and tidy crops, without weeds, with everything manicured." He elaborated, "the farm tour allows landowners to see that progression now… so you see at first it looks bad, but this is what it looks like in year 2, and this is what it looks like in year three. We've got some older sites that are just amazing." He compared delivering extension services sitting down with a landowner. He concluded that the twilight tours help get over a major implementation hurdle, because having farmers experience this guidance in the field was far more valuable than just having it be explained to them.

Both ALUS organizers and Grand River Conservation Authority organizers emphasized that the best advertisements for their programming were success stories of the projects that had been implemented before. On this topic, Anne (Feb. 10, 2010, Personal communication) noted "I [show pictures] of how the creeks have changed… people really enjoy it, they're so interested to see how the creeks have changed after we got the cattle out and put in buffers." Using communication such as twilight tours and success stories seemed to be viewed as an essential step in properly communicating with landowners.

7.14 Capacity

ALUS organizers had identified that they might face some capacity constraints in running a pilot project with short-term funding, and a small staff[9]. ALUS' capacity issues stem from the fact that they attempt to simultaneously fill many roles; they are at once the extension workers, the brokers between funding agencies and the general public and farmers, the bankers, the data managers, the coordinator, the marketing agents, the political lobbyists, etc. Capacity, when it comes to running an EG&S program, is having the necessary tools and skills to fulfil the

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[9] The coordinator is the only full-time employee, though there are a few other ALUS organizers who commit much of their time and efforts to the ALUS pilot.

requirements of the program. This includes having the ability to manage the finances, coordinating participants, seeding/planting, managing data, marketing and outreach, organizing Partnership Advisory Committee Meetings, etc. Capacity constraints usually occur when there is insufficient funding or knowledge to fill in those requirements. The idea behind community capacity is that existing capacity gaps can be filled by utilizing the knowledge and skills that already exist within the farming community in Norfolk County.[10]

One issue that ALUS had experienced with capacity in their development was with the first coordinator: the original ALUS coordinator had not been scheduled as a full-time ALUS employee. Many ALUS organizers, (For example, Steve Scheers, Sept. 16, 2009, Personal Communication) as well as supporters have noted, however, that it is essential to have at least one coordinator dedicate all of their time to ALUS. Hiring Kristen Thompson full time in 2008 was a major step forward for ALUS' capacity.

Another way that ALUS dealt with capacity constraints was by using the resources that already existed in the community to their advantage. This included human, social and physical resources. Steve (Sept. 16, 2009, Personal communication) elaborated on this topic: "Creating gainful employment opportunities, off season, is one of the huge benefits that in some cases is really overlooked… we're now looking at opportunities to harvest seed using the farmer's equipment. Why pay a contractor to come in and work these areas that we're going to plant when we could say we're going to pay you [the farmer]." The idea behind using the resources in the community is manifold: ALUS avoids many sunk costs by borrowing equipment from the participants, they don't have to move their equipment around as much, the money can go back into the community, which is sometimes recycled back into the ALUS program, and can serve as

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[10] Capacity is defined in Chapter 8, along with means by which to build capacity.

income support for the families which engage with the ALUS program and the people who own the equipment usually already have the expertise with using that particular equipment.

When asked about capacity constraints, all of my interview participants mentioned funding constraints as the largest capacity constraint. However, this constraint was explained differently in many cases. For example, Anne Loeffler from the Grand River Conservation Authority (Feb. 10, 2010, Personal communication) viewed short-term funding, and hiring employees for the short term, as a bigger constraint than budgeting itself. "When you're trying to hire for those one or two years, your chances of getting experienced, well-educated staff who are known in the watershed, who immediately have the trust of the farmers in the watershed… you can't achieve that with a short term program." So, she defined the capacity constraint as lack of permanence with funding issues. Andrew Graham (March 1, 2010, Personal communication) also spoke of capacity constraints as being borne from the pressure to run a "lean shop." The Ontario Soil and Crop Improvement Association tried to ensure that funds are being directed at farmers, and not swallowed up by administration. But, as Andrew admitted, that stretches capacity. When asked to define meeting capacity needs, Andrew Graham noted that this included passing all audits, as well as exceeding the expected quality of landowners.

Having access to equipment, and having people to run them, were two major factors in the capacity for running a PEGS. There were also instances in which using community capacity actually enabled ALUS to be more efficient and responsive to community needs. Bryan Gilvesy (Jan. 27, 2010, Personal communication) noted ALUS as having the ability to move their agenda much faster than if they are reporting to the government, or another big organization; "these committees are going to do something right away." There is an emphasis within ALUS of getting things done "on the ground." Using community capacity assisted them achieve this goal, as the

community were the ones who were making it happen. Dave Reid (Sept. 10, 2009, Personal communication) added that part of this capacity is having the community decide what the issues are, and then having them deal with it.

7.15 Conclusion

This section included themes for designing and implementing the ALUS pilot program, which came out of my interviews with ALUS organizers, Conservation Authority Representatives, government officials, EG&S researchers, and farm organization leaders. These ideas can provide key information for future program delivery. Table 7.1 summarizes the themes discussed in this chapter. Finally, some of the ideas considered in this chapter are analyzed theoretically in the discussion chapter that follows.

Table 7 1: A Summary of the Themes from In-Depth Interviews

Theme	Short Description
1. The Sense of Ownership of EG&S Projects	–Aligning program's environment goals with personal farm goals
2. Importance of Confidentiality	–In the program and its organizers –Associated with trust-building amongst participants
3. Program Guidelines	–Differences in views on the necessity of program guidelines
4. Program Simplicity	–Practitioners viewed the need for keeping a program simple in order to secure participation
5. Word of Mouth and Program Uptake	–Word of mouth was a key way of accessing farmers in Norfolk County, for the ALUS pilot
6. Farmer-to-Farmer First Contact	–Recruitment method –Serves as a link between program participants and organizers
7. Social Capital	–Engaging the farming community through the use of existing social networks
8. Participatory processes	–During both the conceptualization and the delivery of the pilot program –Can enhance farmers' decision-making abilities (with the additional information that they have from being part of the planning process) and the implications of those decisions (because the decisions they make affect themselves and their neighbours.)
9. Farmer-Led, Farmer-Driven	–Sub-section of participatory processes –Using the ideas put forth by farmers, specifically for the projects on their own farmland
10. Program Longevity, Reputation and Trust	–The longevity, or permanence, of any given project is dependent on a number of factors, including 　•physical/financial factors (costliness of conversion) 　•perceptions of the program's reputation and longevity, and trust in the organizers
11. One-on-one assistance	–Program organizers act as both technical specialists and delivery agents
12. Managing Participants' Expectations	–Involves communicating well with participants –Managing expectations in terms of the outcomes EG&S projects
13. Capacity	–Use of community capacity: capacity constraints can be filled by utilizing the knowledge, skills and assets that already exist within the farming community

Note: This table was created by the author as a means of summarizing Chapter 7.

Chapter 8: Results and Discussion

8.1 Introduction

I have used 3 methods in this thesis research. Up to this point, I have discussed the ideas and concepts that emerged from two of them: focus groups, and in-depth interviews. Both of these were informed by reviewing the relevant literature. This chapter brings together the concepts from those two methods, as well as a third method, which is content analysis. The result of the combined methods is a list of critical success factors for the design and implementation of PEGS program in Ontario, with a specific focus on the experiences of the ALUS program in Norfolk County. Before I present the results from my research, I will briefly review how this list was compiled.

I discuss the ideas that emerged from all of three of the methods I used, as Figure 8.1 demonstrates below. In qualitative research, this is called methodological triangulation (Denzin 1970), which is the comparison of many (three or more) methods to examine convergences and overlaps within the data in each of these methods.

I have used triangulation to guide what have emerged as the congruous points shared among these methods. I have called these variables the critical success factors of designing and implementing a Payments for Ecological Goods and Services (PEGS) program, with particular focus on the ALUS pilot project in Norfolk County. Table 8.1 lists the themes that emerged from each method used in the first three columns. The fourth column displays the 6 critical success factors, which were arrived at by observing the overlaps between the themes from each methods. The highlighted themes in this Table demonstrate the process through which the critical success factors emerged; I looked for congruencies and similarities between the themes, and included the

theme as a critical success factor if it appeared consistently in all three. The wording did not have to be exactly the same to be considered a critical success factor. Instead, the concepts that were expressed in each of those themes needed to be similar in content in order for the critical success factor to emerge.

I have identified these as the critical success factors for the design, promotion and implementation of a PEGS program. The following six critical success factors that contribute to successful design, promotion and implementation of the ALUS program emerged: 1- Social Capital and Trust; 2- Participatory Processes; 3- Community Capacity; 4- Program Simplicity; 5- Confidentiality; and 6- Communication and Managing Expectations. The first part of this chapter presents and explains these critical success factors with a broader PEGS perspective. The second part focuses specifically on the ALUS pilot in Norfolk County, Ontario. It is a commentary and evaluation of how ALUS addresses the six critical success factors, and includes recommendations for the ALUS program. The purposes of this chapter were to identify the critical success factors, and elaborate on the analysis of each critical success factor first with respect to PEGS programs generally, and then specifically evaluates the ways in which the ALUS program addresses these critical success factors. The thesis of this chapter is that the the six identified critical success factors have the potential to drastically affect program implementation and acceptance amongst landowners. Before the first part of this chapter begins, I briefly review the content analysis method, in terms of what it is, and how I went about identifying the themes that emerged from this method.

Figure 8.1: Critical Success Factors Emerged through Methodological Triangulation
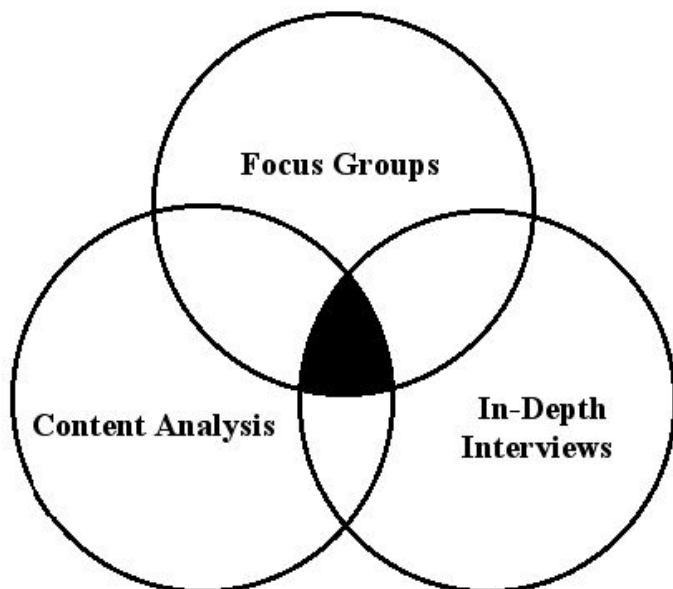
Note: The critical success factors for the design and implementation of the ALUS pilot in Norfolk County emerge from the intersection portrayed by the shaded area in the middle.

Table 8.1: Demonstration of Use of Triangulation to produce the Critical Success Factors

Focus Group Chapter	Interview Chapter	Content Analysis	Critical Success Factors
• Monetary Incentive • Stewardship Ethic Motivation • Community Encouragement • Accessing Information about ALUS • Communication Between ALUS Organizers and Norfolk County Farmers • Fears of Increased Liability and Regulatory Interference • Simplicity and Ease of ALUS process • ALUS' Disconnect from Government Programs • Farm Goals and ALUS Goals • Participatory Processes • Confidence in the ALUS program • Trust	• The Sense of Ownership of EG&S projects • Importance of Confidentiality • Program Guidelines • Program Simplicity • Word of Mouth and Program Uptake • Farmer-to-Farmer First Contact • Social Capital • Participatory Processes • Farmer-Led, Farmer-Driven • Program Longevity, Reputation and Trust • One-on-One Assistance; • Managing Participants' Expectations • Capacity	• Funding sources • Confidentiality • Importance of guidelines • Integration with other programming • Liability issues • Longevity, permanence of programs • Participatory processes • Communication with landowners • Community Capacity • Famer-to-farmer • Sense of ownership • Extension services • Social capital • Trust, confidence in organizers • Working effectively within the community • Program Simplicity • Uptake	• Social Capital and Trust • Participatory Processes • Community Capacity • Program Simplicity • Confidentiality • Communication and managing expectations

Note: This table shows the way in which I arrived at the critical success factors for the design and implementation of a PEGS program in Ontario. The themes that emerged in each method are displayed in each column. The themes that are highlighted are those that emerged across all three methods, with the same coloured highlight meaning that they were congruent across the methods. Six critical success factors emerged, as the fourth column details.

Content Analysis

The content analysis research method included deriving and categorizing messages from texts, and reducing it into the relevant pieces of information; in this case, it was sorted into themes on the topics of successful design and implementation of PEGS programming. My content analysis method included the analysis of written documents, including PAC meeting minutes since ALUS' inception, official and unofficial documents that have been circulated about ALUS, as well as theoretical and practical insights from Payments for Environmental Goods and Services (PEGS) literature. I used NVivo qualitative software program for transcribing and coding analysis. This software allowed me to classify, sort and arrange the data, allowing me to have it in a form that was comparable to the themes that emerged from the other two methods.

8.2 Critical Success Factors of the Design and Implementation of a PEGS Program

8.2.1 Social Capital and Trust

Social capital and trust can have a direct impact on the quantity of goods and services exchanged in a transaction. Relationships and trust can also impact a farmer's decision to participate in a PEGS program, which itself is a type of transaction between farmer and those who fund Environmental Goods and Services (EG&S). PEGS programs can adopt the role of the broker, between farmers and funders, by managing information, bringing funds together, allocating them to farmers who supply acreage and mediating between interests of buyers and sellers.

As I discussed in Section 3.6, Robison and Ritchie (2010) explain that the inclusion of social capital in market exchange results in a shift of the supply curve to the right, as well as a

shift in the demand curve to the right, which results in a higher quantity of goods exchanged, while the effect on price is indeterminate. In Section 4.3, I've shown how the inclusion of social capital in exchange can be applied to the supply of EG&S at the farm level.

In my conceptual framework, in Chapter 4, I envisaged the ALUS organization acting as a broker between the suppliers (farmers) and the demanders (public, NGOs, private firms). A broker is an individual or organization that mediates between the buyer and seller, in this case between farmers and funders. For more information about brokers, using theories drawn from social capital, please see Section 3.14. I hypothesized that the presence of trust, or the inclusion of socio-emotional goods between farmers and the ALUS organizers, encourages the provision of EG&S from their farmlands. This shift in supply occurs when farmers who were not previously enrolled in the ALUS pilot project initially sign up; as well as when trust is built between organizers and farmers, and participants would choose to enrol more land when they are renewing their contract. This conceptual framework follows the Social Capital Exchange Theorem, that with trust, or socio-emotional goods, the number of EG&S exchanged increases. The role of social capital and trust can be understood as reducing transaction costs in the exchange of EG&S; the following section expands on how and why transaction costs can be reduced with the presence of trust.

In my research, I found that the organizers of the ALUS program acted as brokers, or an intermediary, between those who supply EG&S (farmers) and those who demand it (funders). It is by occupying this intermediary position that PEGS program practitioners can increase the incidence of trust and social capital in exchanges, and in doing so, decreasing one or more of search, negotiation, or concluding costs. There are a number of ways in which PEGS program organizers can build trust and enhance social capital, depending on the makeup of their

programming. One way in which they can enhance trust is by disassociating themselves from government programs, and branding themselves as distinction non-government. I found that in the particular community in which my research was situated, where mistrust of government farm programming was pervasive, this helped to reassure participants of PEGS practitioners' intentions. Other ways in which social capital can be used is through existing relationships and networks to locate farmers to supply EG&S, taking advantage of word-of-mouth as an effective advertisement for programming, providing motivation and incentive to share information and respecting the terms on which the exchange was mediated through built respect, ease of conscience, caring about community members, maintenance of reputation in the case of repeated interactions with community members, etc. Moreover, as I discussed in Chapter 3, building on social capital and trust in exchanges can support the continued development of these informal institutions and networks. Trust and social capital are important contributions to understanding the ways in which exchanges are made, because it reflects the social nature in the ways in which people interact in exchange relationships, in determining their decision to participate in EG&S programs.

8.2.2 Participatory processes

Participatory processes are borne from the notion that key information required for the design and implementation of programs resides within the minds of individuals for whom these programs are designed. Including these stakeholders in the design and implementation process can result in a more meaningful and appropriate program for the community in which the program takes effect. In PEGS programs, participatory processes involve collaborating with the farmers and other environmental policy and program practitioners throughout the design and implementation stages. Involving stakeholders in these processes can result in enhanced

information sharing and feedback mechanisms, more effective and accountable decision-making abilities, and maintaining relevance to programs users among its merits. Additional benefits of participatory processes are discussed in Section 3.11.3 limitations are discussed in Section 3.11.4.

In order to achieve the purported benefits participatory processes in PEGS programs, it is important to delineate which people deserve a claim in the decision-making processes. One way in which these programs can achieve this is by using some form of stakeholder analysis, as discussed in Section 3.11. This evaluation assists in determining various actors' relevance to a policy or program. Stakeholders can, and should, be explicitly defined in order to eliminate confusion; this can be done in a PEGS program's Terms of Reference for their stakeholder committees. These documents can include a rationale for why each group of individuals are included in the decision-making processes that define the principles and actions of the given organization

Using participatory processes was a congruent theme across all three methods used in this study, as all groups of research participants and documents alluded to the special importance of having the consent and acceptance of all parties within PEGS programs. They were aware that the management of the resources depends on a range of interests, values, and institutional rules. So many different stakeholders define those interests, values and institutional rules. In order for these to come together in an effective program, my respondents articulated the need to have an avenue through which their voices were heard, and through which they can affect change to the architecture of the program. My respondents specifically spoke to the need for landowners to be considered as integral components within PEGS program design and implementation. The way in which participatory processes can build sustainable programs is that by engaging landowners

in participatory processes, the individuals most apt and able to deal to inform the program's design, are simultaneously the people responsible for performing program tasks and activities. Through participatory processes, the landowner is engaged in the process, and is part of the solution, while the program itself remains flexible, and suited to adapt to externally-driven changes.

Landowners can voice their preferences at each committee meeting, bringing the important decision-making variables into the structure and implementation of the program itself. Choosing the right stakeholders, within workable institutions, affects the impact and relevance of a PEGS program. A lesson learned from this research is that this critical success factor reinforces the findings from the relevant literature, which tended to advocate participatory processes specifically for natural resource management, as I discussed in Section3.11.3. Moreover, this critical success factor supports the structural organization of a number of agricultural-environmental programs in Ontario. ALUS, the Environmental Farm Plan, and many Conservation Authorities already have participatory processes in place. Identifying participatory processes as a critical success factor lends credence to the way in which these organizations go about their work, and suggests further that they should maintain this component of their programming in the future.

8.2.3 Community Capacity

The participatory processes section above considered the role of the community in setting its own agenda for program development, and being the agents who guide the implementation of the program itself. The third critical success factor, community capacity, considers the use of resources in the community that are assets in program implementation, on which a PEGS program can draw upon in order to fill programmatic gaps or constraints.

McKnight and Kretzmann (1996, page 3) define community capacity as the ability to organize and/or transform assets and resources in the community to achieve certain objectives. Community capacity is understood to be both an input (a means to successfully implementing a PEGS program) and an outcome (strengthening the abilities of individuals, families, social networks, organizations, communities, etc). In PEGS programming, this involves the development of policies, programs and activities that build upon the skills and assets of the people in the community in which the program is directed. For example, a PEGS program might consider undertaking environmental projects which build on expertise that farmers already possess, such as the seeding and maintenance of native grasses. While there may be tradeoffs between locally-relevant skills and the projects most environmentally appropriate, the community capacity perspective would suggest that a program can incur (sometimes vital) cost savings by drawing on the skills and tangible assets (like tractors, seeding equipment, etc) that are readily available in the community. Newly developing pilot projects can be both a large time commitment, as well as a heavy resource commitment. Because of these costs, it can become pertinent to draw on existing community infrastructure. In order for PEGS programs to be sustainable in the long-term, these need to have consistent access to program implementation resources to ensure the smooth and stable continuation of programming.

Community capacity was important to different stakeholders in different ways. Building on community capacity and participatory processes, according to ALUS program participants, entrusted them with a sense of ownership of the on-farm projects, and encouraged participants to work more intimately with the PEGS practitioners and the organization's objectives, which was discussed in section 3.13. ALUS practitioners also identified community capacity as important (see Section 7.14); however, their reasoning had more to do with the realities of capacity

constraints in implementing a PEGS programs. Community capacity was considered as using alternative sources to bolster capacity constraints, which were described as funding issues, whether it was short-term, inconsistent, or simply not enough funding, too few employees, or not having access to necessary equipment.

One way that community capacity can be achieved is by specifically incorporating community capacity into a PEGS program's process. In consulting with farmers about the types of PEGS projects that he/she would like to see on their farm, an organization can also suggest the pursuit of those projects to which the farmer possesses a skill set which could be put to use in project implementation. Community capacity is especially important to consider in the formative stages of a program; and it is an issue that seems to be on the forefront of the minds of many of the interview and focus group participants in my case study. A lesson learned from this critical success factor would be the suggestion to consider community capacity at the early stages of PEGS programs, so as to build a steady and more full set of resources and assets from which a program can draw upon, as well as a mechanism by which to cutback on new program costs.

8.2.4 Program Simplicity

The importance of program simplicity was a repeated theme throughout my data collection. Program recipients, organizers and observers recognized the significance of keeping a program as simple and user-friendly as possible. This was seen to be a way to reduce barriers to participation. One key way in which a PEGS program can communicate simply is by being clear about its program objective(s).

There are different program objectives that a PEGS program can encompass, which result in different program design implications, as well as different measures of program success. PEGS programs usually include an equity objective and/or an efficiency objective. As Pascual et

al. (2010, page 1237) pointed out, delivering efficient ecosystem service outcomes is typically seen as the guiding principle in PEGS literature, but equity issues are an important aspect that practitioners ought to take into account when designing PEGS programs. Having a sole focus on efficiency would not necessarily build the community capacity on which PEGS programs might rely, which was emerged to be a critical success factor and was discussed in the previous section. Other ways in which PEGS practitioners advocated program simplicity included having a streamlined process, with a one-page application process, and the payments for farmers presented in a straightforward fashion. Also, the fact that a PEGS program adopts the role of the intermediary can further a PEGS program's simplicity in that the organizers have the ability to eliminate some of the confusion that farmers might feel when faced with many agricultural-environmental grants and programs.

In my focus groups, participants and non-participants noted that their participation was positively related to the perceived effectiveness of a program, as Section 6.4.3 discussed. Having explicit program objectives and guidelines can be a productive step in that direction. This involves having (a) clearly stated objective(s), with a consistent message across different types of documents and consistently communicated to different audiences. Having this simplicity can build a PEGS program's integrity, reputation and enhance potential participants and funder's confidence in the program.

8.2.5 Confidentiality and Liability

The fifth critical success factor of a PEGS program is the perception of confidence that participants held in the program. These attitudes toward the program's pending success were seen to be an important factor that promoted or inhibited participation. Confidence seemed to be closely related to perceptions of trust, and these two ideas were often mentioned simultaneously.

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Confidence levels amongst farmers also seemed to be inversely related to concerns about liability; the more concerned farmers were with potential liability issues that could come with participating in a PEGS program, the less likely they were to be confident in the feasibility and future of the program. This fear negatively impacted participation, as was demonstrated by the dichotomy of views expressed in each focus group discussed in Section 6.4. ALUS and other PEGS organizers also noted that confidence levels with associated concerns about liability, as it was discussed in section 7.3. Confidence in the ALUS program was also related to perceptions of program longevity. This was discussed most abundantly in the focus groups in section 6.3.7, with the non-participants citing it as a barrier to participation. PEGS observers and theorists (for example, Mantau, 2001) also cite liability is a major issue in confidence-building amongst PEGS program participants. The emphasis on the importance of confidence building, especially from farmer participants, but also from PEGS practitioners suggests that this is an important area in which good communication, with both current and potential participants of PEGS programs, is necessary. It is not enough to assume that participants know the ways in which their land-use rights will change by participating in PEGS programs. These organizations should clearly explain what implications joining a PEGS program could have in terms of liabilities, as well as ways in which they plan to address liability issues that could come up via participation. This leads to the final critical success factor, which emphasizes clear and open communication across all matters.

8.2.6 Communication and Managing Expectations

The importance of open and clear communication between program organizers and farmers was emphasized across all three methods. These were factors that farmers noted were

necessary to address for their participation in EG&S programs, and practitioners recognized the impact that this variable had on program effectiveness.

Good communication was related to managing farmers' expectations when it came to producing EG&S on their farms. For some participants, planting and developing the types of projects that PEGS program offers may be new to them. The precise management and normal expectations of these crops and projects are not always known. Thus, open and clear lines of communication are key to creating knowledge and acceptance of the establishment of EG&S on the farm.

Communication was described by both participating and non-participating farmers to include both competence and knowledge of EG&S, as well as the accessibility of the PEGS program organizers. Success stories were also helpful in positive communication, as recounted by both farmers and interview participants. Communication and managing expectations were important concepts raised across the research methods. Farmers made it clear that the ease of communication with PEGS organizers affected their decision of whether or not to participate. Without farmers, there is no program; and so without effective communication, there is no program. The theme of communication was discussed more thoroughly in Sections 6.3.1, 7.7 and 7.12. PEGS practitioners, and other interview participants, agreed that the need to manage farmers' expectations, and maintaining open and clear communication were essential to running an effective PEGS program.

8.3: Comparison with Conceptual Framework

The chapter, so far, has described the six critical success factors for the design and implementation of a PEGS program in Ontario, as they emerged across methods used in this thesis research. The six critical success factors that came out of methodological triangulation did

somewhat surprise me; my original hypothesis only suspected social capital and trust to be

critical success factors, when in fact, my research lead me to find five additional critical success

factors. My research focus expanded over the course of my study; initially the focus was on the

role of trust and social capital in the implementation of PEGS programs. Eventually, my research

design expanded to include other critical success factors, which emerged throughout my

research. These changes were captured in the evolution of my conceptual framework, first

presented in Chapter 4. The original conceptual framework did not negate the possibility of

having additional critical success factors. In fact, the framework acknowledged that there were

inherently many decision-making variables that could be considered in the participation in a

PEGS program. Thus, the results found in this chapter are not disconcerting. In fact, they fit in

quite nicely into a modified conceptual framework, including the six critical success factors

identified in this chapter. Figure 8.2 shows an updated version of the conceptual framework

presented in Chapter 4, including the critical success factors that emerged as presented in this

chapter. The emphasis of the modifications to my conceptual framework was within the

'Individual Decision Variables' section. I updated it to include the critical success factors that

emerged in my study[11]. The way to interpret this modification to my conceptual framework is

that the critical success factors that emerged throughout my research are key factors which are

considered when farmers are choosing whether to participate in a PEGS program. For example,

take the trust factor. If there is a high level of trust built between PEGS practitioners and a

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[11] I included 5 of the 6 critical success factors in my updated conceptual framework. I did not
include community capacity. I chose to leave it out of the updated conceptual framework
because it is a means by which a PEGS program can improve program effectiveness and reduce
costs, but it is not something that a participant would directly consider in making a participation
decision. Thus, for the purposes of this research, it is still considered a factor critical to
successful implementation of PEGS programming, but was not included in my farmer's decision
making model.

farmer, then they would be more encouraged to participate in a PEGS program. The same logic follows for the rest of the critical success factors. While the author acknowledges that there are other factors that enter into decision-making, the findings from this research suggests that these are key areas for a PEGS program to focus on enhancing in their programming in order to achieve high levels of participation.

Figure 8.2: Updated Conceptual Framework
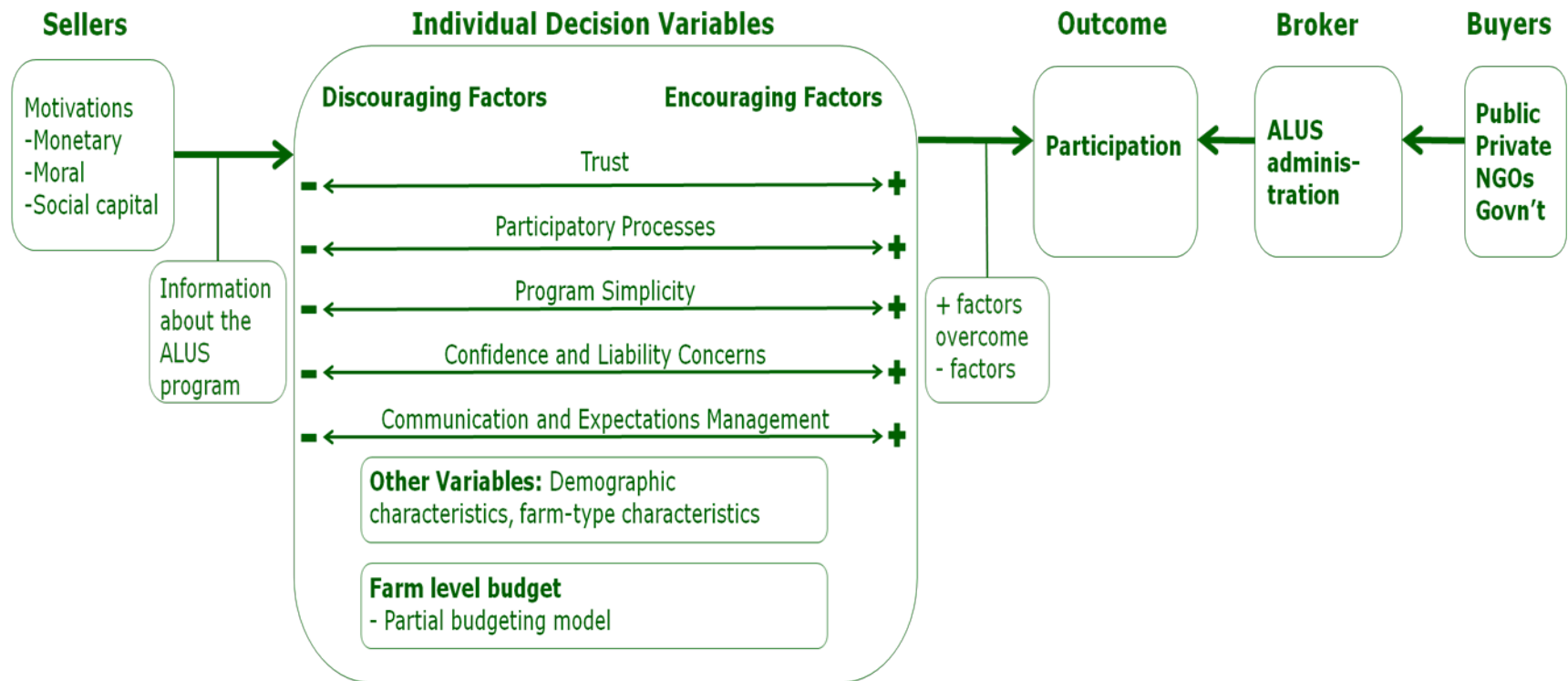
8.4: ALUS – Commentary, Evaluation and Recommendations Based on the Critical Success Factors

The second half of this chapter focuses specifically on the ALUS pilot in Norfolk County. This section of the chapter examines the Norfolk County ALUS experience in light of the critical success factors in section 8.2. This includes an evaluation and recommendations for the ALUS program.

8.4.1 Trust and Social Capital – Application to ALUS

In the ALUS model, trust and social capital have allowed some farmers in the community to overcome transaction barriers because of relationship qualities such as comfort, confidence and reputation with those who endorse and organize the ALUS pilot, as discussed in the Focus Group chapter, in section 6.3.8. While ordinarily, participating farmers may not have chosen to engage in environmental programming on their farms, using existing social networks, and building on relationships that had already forged in the community allowed the ALUS program to having a broader reach into Norfolk County. This is an important point, because the social capital that ALUS used already existed in the community prior to the launch of the pilot in Norfolk County. When capacity constraints a concern such as the case in the ALUS program, building on existing relationships and networks can be a cost-saving mechanism. The way in which trust and social capital alter the terms of an exchange is best communicated using transaction costs to explain their efficacy.

- The Ways in Which ALUS Reduces Transaction Costs: The Role of the Broker

The ALUS program acts as a broker between the providers (farmers) and funders of EG&S. ALUS organizers manage information, raise, allocate them to farmers who supply

acreage and mediate between interests of funders and farmers. In ALUS' case, social capital and trust were developed to overcome information barriers, and so reduce the incidence of asymmetric information. Furman (1997, page 84) comments, "trust in the socio-technical components of the program, such as the expertise of the program staff, assessment information, and technical advice – positively associated with greater participation [in the environmental farm plan]." This was seen to be true for the ALUS pilot as well; as was discussed in sections 8.6 and 8.2, trust and confidence in the ALUS program and its organizers were positively associated with participation.

The role of the broker is important in ALUS' case as building one-on-one relationships is an important component in trust building. Brokers can enhance the levels of trust in the exchange of EG&S, and can reduce the transaction costs, as the following sections explain.

- ALUS and the Reduction of Search costs

The ALUS model develops social capital to reduce search costs in the delivery of the program. For example, farmer liaisons (farmers from the community, hired by the ALUS program) can significantly reduce the search costs simply with their understanding of the people in their community. The farmer liaisons, and the organizers, can begin discussions of potential participants with an idea of the farmers who reside in Norfolk County, and estimations of those families that would be a good fit in the program. This can reduce the costs of searching for, and obtaining new participants.

- ALUS and the Reduction of Negotiation Costs

In the ALUS model, the use of farmer liaisons also reduces the barriers in communication with the farmers in the community, when the people that approach them are their friends and neighbours, as was discussed in sections 6.2, 6.3.1, and 7.6. This can reduce the negotiation

costs, as the desire to 'cheat the system' so to speak, is not as prevalent when the person who a farmer is negotiating with is another farmer. The idea that farmers "speak the same language," and give off the impression of credibility to other farmers can also reduce the costs of negotiating the transaction, as was discussed in section 7.7.

- ALUS and the Reduction of Concluding Costs

In the ALUS model, monitoring and enforcement is done through a third party organization. While social capital has a minimal affect on the reduction of this transaction costs, there is the point that many of the farmers were comfortable and familiar with the Agricorp organization, which does the auditing for ALUS. Thus, the threat of strange organizations coming onto farmer's land was quelled with the use of a trusted farm organization, with a good reputation in the farming community.

There is also a built-in mechanism for keeping concluding costs low in the ALUS model. ALUS organizers concentrated on developing demonstration farms in the pilot project, which has a built-in positive social pressure for maintaining EG&S lands in accordance to ALUS standards. An ALUS update for Norfolk County (February 23, 2006) describes the purpose of the demonstration farms as, "assist[ing] with farmer education about ALUS, to provide tours for potential partners and funding sources and to provide media coverage with the concept." This attention can ensure that EG&S project are well maintained by farmers.

The ALUS program also built social capital and trust through having well-known and respected members of the community as leaders of the program. For example, Bryan Gilvesy, the current chairman of the Partnership Advisory Committee, has taken on the role of ALUS spokesman, and by speaking with a farmer's voice, and with his charismatic and out-going nature, he has been able to communicate farmers in the community and help build their

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confidence in the ALUS pilot. Dave Reid too was known in the Norfolk County through many years doing stewardship work with farmers. He had previously built trust with landowners, through his experiences and competence in stewardship work. The ALUS pilot in Norfolk County built upon the social capital and farmer reputations that already existed within the farming community, in order to catalyze the participation process. The use of the networks, norms and trust within the farming community can reduce the transaction costs of implementing a PEGS program.

8.4.2 Participatory processes - Application to ALUS

ALUS organizers have defined stakeholders to involve the community of farmers who are eligible to participate, as well as fund-contributing partners, technical experts and policy experts. To see ALUS' Partnership Advisory Committee's (PAC) Terms of Reference, please see Appendix E. The PAC's terms of reference clarify the rules for procedures, as well as lay out the stakeholders who are to be included on the committee. The following section is a commentary on how participatory processes are implemented in the ALUS pilot.

- Implementation of Participatory Processes and ALUS

ALUS' committee meetings are composed of mainly local participants, and are chaired by a local farmer. This can put participating farmers more at ease to speak their minds, and put forth suggestions without guarding their thoughts and opinions. Moreover, the nature of the Partnership Advisory Committee is participatory, with the farmers assisting in the design of the program that is then implemented on their own farm. In ALUS, committee members are familiar with one another, and each other's backgrounds. Participants introduce themselves at every meeting, including their associational affiliations. Any conflicts of interests must be stated at the beginning of the procedural order, and they are outlined explicitly in the committee's Terms of

Reference. Moreover, participants on the Partnership Advisory Committee come from various backgrounds, with a different stake in the ALUS approach. There are ALUS organizers and representatives from associated farm organizations, government officials, Conservation Authority representatives and more present at each committee meeting. This can assist in keeping 'bigger picture' goals on the forefront. While vested interests might be brought up at the meetings, these other participants can round out those interests with concern for the community as a whole.

ALUS currently meets the implementation guidelines as outlined in section 3.11, and has done so throughout the development of the pilot in Norfolk County. Participatory processes are integral to the ALUS approach. A key message from their communications plan (October, 2006) was: "This program is a new direction in agri-environmental programming because it empowers farmers and rural communities to make positive change and it may also help to reconnect Canada's urban and rural people via their shared concerns for the environment."

In ALUS' case, their participatory approach is specifically exhibited in two sources: first, the Partnership Advisory Committee, and second, their project implementation process. Each is described in turn.

- Partnership Advisory Committee

The purpose of the Partnership Advisory Committee, according to the Term of Reference (ALUS 1, 2006, page 1) is to "oversee the management and administration of the ALUS pilot project in the county." The Partnership Advisory Committee has participatory processes at its roots. This is demonstrated both by the membership and the decision-making process.

- Membership

The majority of the voting power on the committee is farmers, a nod to ALUS' farmer-led, farmer-driven process. Other members include people who, according to the Terms of Reference (ALUS 1, 2006, page 1) are "partners contributing significant resources." This has included the ALUS project coordinator, president/vice president of the Norfolk Federation of Agriculture, representatives from Norfolk Land Stewardship Council, Delta Waterfowl Foundation, Norfolk Soil & Crop Improvement Association, Norfolk County, and a federal and provincial government representative, either from an agricultural or an environmentally-based ministry. The chair is an elected local farmer. Any conflicts of interest are stated at prior to the discussion of the topics on the agenda.

- Decision-Making

Decision-making in the committee is made by consensus as much as possible. Although it occurs infrequently, formal voting is relied upon if necessary. Sub-committees may be conceived as necessary, with at least one PAC member on those committees, who acts as the chair. Any proposals that stem from these committees must be passed before the Partnership Advisory Committee before they are implemented. Meetings are held on an as-need basis, with about $7-8$ meetings per year being the norm for ALUS' pilot phase.

O'Connor and Cooper (2005, page 6) argue that consensus building, like what ALUS does at its committee meetings, is an important step to coming to more informed and reasoned decisions. They write "consensus requires people to transform their points of view or frames of reference, which is a process of learning… effective discourse requires that individuals be willing and prepared to seek understanding and to come to some reasonable agreement and an environment that is free from coercion and power imbalances, that encourages respect for self and others and that welcomes diversity."

-ALUS Process

The second way in which ALUS contains a participatory process ethic is through its project implementation process. I have summarized this in the 9-steps that occur when a farmer participates in the ALUS program.

1. Farmer-to-Farmer Contact

The first approach to farmers in the community is done by other farmers from the same locale. These first approaches are done in various ways. Sometimes, farmers are invited to an ALUS workshop, in which both ALUS organizers and participating farmers speak, as well as local conservation authorities. Other times, a farmer liaison will knock right on doors of farmers in the communities, and attempt to engage them through the conversation that follows. This method is used when the farmland is on a priority site. Other times still, a farmer engages their neighbour, either through a sign on their gate or simply bringing it up in conversation. Should a farmer express some interest in the ALUS program, this leads to the second step in the process.

2. Site Visit by Coordinator

This step involves the ALUS coordinator visiting the farmer in question at their farm. Sometimes, the coordinator goes alone; oftentimes, various ALUS organizers or farmer liaisons will accompany her. This trip is quite informal. Usually, it includes a walk around the farm and discussions about the different possibilities for ALUS projects that could be implemented. The ALUS coordinator brings a GIS map of the farm, to utilize as a decision-making tool.

3. Expression of Interest Submitted

This is a simple, one page-form. ALUS organizers have tried to make it as easy as possible for landowners. Information submitted on this expression of interest include: personal information, farm description, setting up a site visit, Environmental Farm Plan completion status,

and a large section where the landowner gets to outline their vision of an ideal ALUS project to be implemented on their farm.

4. Peer Review by ALUS Committee

Once a year, the Partnership Advisory Committee reviews all of the expressions of interest that come in for the year. They are presented with a GIS map of the farm and details of the desired project. They evaluate the proposals based on a number of factors, including feasibility of project, costs of project, potential for ecosystem functions of the land in question, etc. Generally the rule is first come, first serve in terms of selecting the applicants, although Dave Reid has suggested that projects with more permanence re be preferred over those that can easily be plowed over in the future (Dave Reid, personal communication, January 27, 2010)

The majority of the voting power on making the decisions on this committee is held by local farmers. This is another step in which the decision-making processes within the ALUS structure are participatory. Also, the Partnership Advisory Committee is composed of local people. Locally focused. This is important because there are local particularities, and having the review committee be composed of mostly of local residents allows for these nuances to be captured.

The proposals are subject to the normal operating rules and principles of ALUS, including the workable land capping restriction, and the principles of choosing the most marginalized and environmentally productive land on each farm.

5. Project Implemented

The project is then implemented in the spring. The seeding, planting, creation of wetlands, etc. is done by a local farmer, along with a project coordinator, and sometimes assisted by the local conservation authority. The seeds used are purchased from a local grower. The

equipment has been purchased by ALUS. They utilize the knowledge of EG&S planting/growing gained from experiences incurred in earlier iterations of the pilot in the project implementation.

6. Conservation Agreement Signed

When the project has been implemented, the landowner signs a conservation agreement with ALUS. This is a 3-year contract, in which the farmer agrees to maintain the areas developed by ALUS for the duration of the contract. Maintenance includes upkeep of the various EG&S, as well as agreement to not destroy or disc up the project. There is an opt-out clause, whereupon if the farmer wishes to convert the land out of EG&S production, they must return all annual payments received, as well as the start up costs.

7. Start Up Costs Covered

The costs of project implementation are reimbursed up front, including the price of seeds, labour, etc.

8. Annual Payment for EG&S

Each fall, the farmer receives the $150/acre payment for the EG&S delivered on his or her farm. Exceptions do apply when the EG&S is being used for multiple purposes.

9. Random Auditing

Ten percent of ALUS projects have been selected yearly for an audit. The selection process of this auditing is random. An audit is deemed successful based upon an expected acreage verification process. The audits are currently conducted by Agricrop, which, according to the Partnership Advisory Committee meeting (Personal Communication, January 27, 2010) has a positive reputation amongst landowners in Norfolk County.

The structure of ALUS, according to Dave Reid (Personal Communication, January 27, 2010) builds on the notion that "farmers make good decisions, and the ALUS process encompasses that." By building on participatory processes, the ALUS model increased its ability to achieve an adaptive capacity, whereby learning and flexibility are contained within the model. By including the farmers who will ultimately supply the EG&S on their private farmland, in the organization's structure and decision-making, ALUS has the advantage relevant and legitimate in the eyes of its participants, and able to adapt when challenges arise.

8.4.3 Community Capacity - Application to ALUS

The Norfolk ALUS pilot launched on Sept 20, 2007, but on a much-reduced scale than it was originally conceived. (Thompson, Personal communication, June 4th, 2009) In the first couple of years of the pilot, the organization experienced some capacity issues. For example, the Patterson Creek buffer project was not completed as scheduled in 2008. At a PAC meeting (Feb 26, 2009), it was reported that this was due to "a lack of time and human resources during the 2008 planting season." The planting was resumed the following year.

There were some occasions in which funds ran out for ALUS activities. For example, it was discovered at the July 29th, 2009 PAC meeting that the ALUS budget had "no more funds available for EG&S payments." They had to shift funding to fulfil the current EG&S payment commitments. This also implicated the need for more fundraising for future participants. They recognized the need to fundraise in order to have continuous enrolment over the 2010 field season. Moreover, Reid (July 9, 2007) noted that "much of the current ALUS budget is administrative, and while necessary, this could appear unfavourable to the public and politicians/bureaucrats in the instance of an audit." Having this added pressure of directing funds away from administration can put strain on those who are working in the administrative

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components of the program. Coming up short on funding during the implementation of those projects tells a clear story of capacity constraints. It limits the activities that the organization can undertake, as well as the efficacy with which they can be undertaken, if fundraising becomes part of the implementation process.

In order to address some of the capacity issues, the PAC came up with a series of remedies that could be sought in the community. ALUS took advantage of the community capacity in using the County's administrative assets to help with the banking and the data management of the pilot. ALUS also hired local farmer liaisons to be the first contact in attempts to reach farmers along Patterson Creek. It was hoped that by employing farmers in the community, prospective participants would be more engaged, and willing to consider partaking in an ALUS project. In social capital-terms, ALUS was trying to build on a sense of obligation that already existed within the farming community in Norfolk County, and used this established relationship to their advantage. A given farmer's reputation in his or her community was one of many assets considered in selecting the farmer liaisons (June 4, 2007, PAC meeting minutes). Other qualities that were considered were farming experience, public speaking skills, well-informed about the ALUS model, and a diversity of representation across farm-types in Norfolk County.

Another way in which ALUS built on existing community capacity, was in hiring a local farmer to do the prairie grass planting for the 2009 planting season. Dave Reid (PAC meeting minutes, January 2009) noted, "hiring a farmer will strengthen ALUS' links to the farming community and create employment." ALUS also relied on many functioning community institutions in operationalizing their programming. For example, the ALUS pilot turned to the Long Point Region Conservation Authority's capacity in assisting with their extension services.

Even in utilizing the existing structures in the community, however, capacity issues arose. For example, on September 27th, 2007 (PAC meeting minutes), the Long Point Region Conservation Authority's General Manager, Cliff Evanitski identified that "more staff would be required to complete the extension services as his current staff complement is more than busy with existing projects." ALUS' capacity to conduct the pilot affects the reputation of the program held amongst members of the farming community. It was observed at a PAC meeting on July 9th, 2007, "address[ing] the carrying capacity of the current ALUS pilot [is needed], in order to prevent public disappointment in being unable to receive the services advertised." About a year later, the acting coordinator observed that he was having trouble meeting the needs of the ALUS pilot. On June 12, 2008, Eric Cleland (ALUS coordinator at the time) noted that it was a busy spring, and he found himself filling the role of extension supervisor in order to complete tasks in a timely and accurate fashion within the short planting window. The ALUS program coordinator plays a critical role in the functioning of the pilot. This position entails multiple responsibilities: the coordinator is at once an extension supervisor, a data manager, the budget manager, and project organizer. It was acknowledged at a PAC meeting on July 7th, 2007, that a full time coordinator was necessary. Dave Reid added (Sept 23 2008) that having a coordinator was essential because "extension and relationship building are necessary for the pilot project's success." At a PAC meeting on November 26, 2008, Reid stated that more funding was necessary to provide the financial support needed for the full-time position. This situation with the coordinator demonstrates the irony, and particular difficulties with running a pilot project; attaining capacity requires having capacity in the first place.

Lessons learned from the ALUS pilot's experiences, when it came to community capacity, are twofold. First, it serves as a warning for the capacity issues that tend to plague pilot

projects. This is not the fault of the ALUS organization, but is a description of the reality of the high start-up costs and learning curve that comes with initiating a new program. Second, the positive experiences that ALUS had with engaging the community in an effort to build program capacity captures potential avenues for directing future pilot programs. Utilizing community capacity has the potential to benefit a pilot with cost-saving mechanisms, and in ALUS' case, was tied closely with building social capital with community members.

8.4.4 Program Simplicity - Application to ALUS

The section that follows describes what I have perceived to be a potential conflict of objectives in the ALUS program, and suggestions for a way forward. ALUS, as a PEGS program, had in its development, the potential to encompass many different program objectives, some of which have conflicting program design implications. For example, Pascual et al. (2010, 1237) identifies two common objectives of PEGS programs: "[PEGS] can be seen as a way to improve economic efficiency, as well as a policy instrument with which to address equity issues/income support." I have documented several different objectives that have been stated, by ALUS organizers, as those that the approach encompasses. I will present these in this section, and discuss the program design implications that follow from these objectives.

From a presentation on June 17, 2003, three ALUS program objectives were stated: "Principally, ALUS is aimed at: Delivering environmental benefits (clean air, water, fish and wildlife habitat, etc) demanded by Canadians; Renewing rural communities; and Supporting farmers as they deliver environmental benefits to Canadians." In an ALUS briefing note, (January 19 2004) it was added that, "ALUS is good news for agriculture, the concept can assist farmers and ranchers coping with crises… while providing sustainable environmental benefits."

Both of these quotes point to the idea that the ALUS program is primed on at least two objectives: financially rewarding the farming community and providing ecological benefits.

These two goals can be broadly categorized as those commonly held for PEGS programs, as analyzed by Pascual et al. (2010): these are an efficiency objective and an equity objective. Ecological efficiency can be understood as the level of environmental additionality as a result of changes made under the ALUS regime. Environmental additionality, according to Pascual et al. (2010, page. 1238) is "the net impact of the biophysical provision of ecosystem services, in comparison with the baseline scenario or hypothetical situation where the PES scheme is not in place." Environmental additionality is thus a necessary, but not sufficient, criteria in meeting the ecological efficiency objective. It is a criteria that speaks to the idea that those who supply EG&S meet the demands of those paying for them. The second program objective, equity, refers to the availability of the program to various socio-economic groups that reside in Norfolk County. Both ALUS' objectives of strengthening rural communities and supporting farmers as they deliver EG&S can be categorized within the equity objective.

These two objectives have different implications on program design. This conflict is demonstrated through the different ways in which success is measured, in meeting each of these goals. Being successful in reaching the efficiency goal requires achieving the highest level of environmental additionally possible given the circumstances. Achieving this goal, however, does not imply anything about the equity with which EG&S funds are distributed throughout the community. Conversely, being concerned with the equitable distribution of funds across the community may not result in the most efficient delivery of EG&S. The reason for having a focus on efficiency in PEGS design and implementation is quite straightforward: providing EG&S is the raison d'être of a PEGS program. A focus on equity is also important in practise, in terms of

the acceptance of a given PEGS program. An agricultural-environmental program cannot be successful if farmers do not participate, and if its terms of conduct are not accepted by those who would fund it.

While I believe it is possible for a PEGS program to embody both types of objectives, I also believe that it is necessary to acknowledge the contradictions that can arise from a clash in program goals. Ultimately, different PEGS program instruments result from different program objectives. Since ALUS seems to strive to achieve two at once, there very well could be criticisms when they pursue one objective potentially at the expense of the other. For example, in keeping the program open to anyone in the county, not just those with the most ecologically sensitive land, the level of program efficiency may be sacrificed in order to satisfy a fairness criterion of equity in program distribution. Capping enrolment of farmland at 20% of a given farm's working land also allows for more farmers to participate in the program (increased equity), but it precludes the possibility that 100% a farmer A's land is more ecologically sensitive than any of farmer B's land; yet, they might currently both contribute 20% of their land in the ALUS program.

Recommendations that follow from this section include the suggestion to acknowledge the conflicts that can arise when a PEGS program embodies both equity and efficiency objectives. As well, being clear in the communication of program objectives will simplify and clarify what the program can do for farmers, and increase the public's understanding of the program. One aspect that could clarify program objective communication is by having explicitly guidelines.

Program guidelines have the potential to simplify PEGS programming, in clarifying what the program does and does not do; and making it clear for participants who is, and who is not

eligible. In the some of the earlier discussions of ALUS pilot, the flexibility of guidelines was discussed. For example, there was a discussion on December 14th, 2006 about ALUS undertaking a list of specific environmental actions, in contrast to accepting new ideas from farmers. There was the consensus that "new innovation may come from the farming community, and the committee should remain open to suggestions from landowners." Bob Bailey re-iterated in 2009 (May 14, 2009, PAC meeting minutes) that "close specifications and remaining committed to the 20% cap of total farmland would be necessary." However, as was discussed in the Section 7.4, there have been recent discussions (PAC meeting, April 7, 2010) to relax the two working guidelines that ALUS has in place. However flexible ALUS decides that the guidelines are, they are a means of communication of the program's objectives. They must, in my opinion, remain consistent with the message of the program's objectives that are communicated across all audiences.

8.4.5 Confidence and Concerns about Liability – Application to ALUS

This section outlines the ways in which confidence in the ALUS program factor into their future success. Also described are some of the actions that ALUS can take in order to make an effort to ensure confidentiality, and how attempts can be made to lower perceived risks associated with participation.

The ways in which farmers revealed that they perceived liability concerns with participating in ALUS is that by producing EG&S, some farmers perceived that they may open themselves up to increased regulatory liability by protecting those ecologically sensitive areas. As of now, there is no safe harbour clause within the ALUS approach. This has been a re-emerging theme at their PAC meetings, however at the time of this writing, there has not been a formally drafted clause. By planting buffer strips, or building a wetland, farmers provide much

area for nesting ground for birds and land-based animals. Some of these may be protected under the species-at-risk legislation, which prevents a farmer from certain land-use practises that he might have otherwise wanted to do. Increased regulatory liability results in decreased choices and opportunities for farmers, which can affect them in the form of additional costs to farming. Some farmers in Norfolk County also perceive liability concerns associated with ALUS through the potential exposure to the public that they open themselves up to by having aesthetically-pleasing lands. With potentially abundant wildlife upon their land, the general public may be tempted to trespass, according to some of the Norfolk County Farmers.

I believe that ALUS has the capacity to assure participants and potential participants of their protection within the ALUS program, and raise confidence levels when it comes to liability concerns. Some of the actions that ALUS can take to assure participants and potential participants are described below, in turn.

The first way that ALUS can quell liability concerns would be to initiate and communicate a safe harbour clause. As mentioned above, this has been a re-occurring theme at PAC meetings (for example, November 1, 2007, and March, 2010), and if it were seen to be a major hindrance to participation, the committee might move forward with the development of this clause. The second way would be to clearly articulate the difference between ALUS and peer-reviewed Environmental Farm Plan in terms of liabilities, and promote ALUS as a middle-ground between peer-reviewed Environmental Farm Plan and undertaking no provision of EG&S on farmlands. With the Environmental Farm Plan, farmers have to identify at-risk areas on their farmland, and use Best Management Practises to deal with these issues. At the peer-review stage

of the Environmental Farm Plan[12], farmers are required to expose environmental risks and issues

to Ontario Soil and Crop Improvement Association staff, who are funded and intimately

connected with federal and provincial government branches. This is how a farmer would receive

financial compensation under the Environmental Farm Plan. ALUS, on the other hand, operates

by asking the farmer what he or she wants to see done on his or her farmland, and working

together to create environmental goods. The difference between the two programs, then, is the

identification and minimization of environmental risks (Environmental Farm Plan) vs. the

provision of ecological goods (ALUS). This impacts the potential liability issues that come out

of participation in a PEGS program. With the Environmental Farm Plan, potentially sensitive and

private information is given to a third party, specifically the government who funds the

Environmental Farm Plan. With ALUS, the organizers can, and do, re-assure farmers that

information which could impact them negatively is not going to come back to penalize them. It is

in this way that ALUS can appeal to a niche group of farmers, those who do not want to lose

control over information that could put them at risk to additional legislation, but still want to

participate in a program that allows them to provide EG&S, with assistance and funding. ALUS

is premised upon farmers going above and beyond their moral and legal duties to deliver EG&S

on their lands and being rewarded for doing so, and I believe that this message will hold strong

with many farmers in the community.

There are other ways that ALUS can build confidence amongst farmers in the

community. One way would be clearly articulating their separation from government-run

organizations. As discussed in Section 6.3.4, this message seems to not be fully understood by

potential participants in the ALUS program. ALUS organizers seem to like to maintain a clear

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[12] The peer review stage is the fourth of five steps in the EFP. Not all farmers participating in the EFP go through all stages. Participation decreases with each incremental stage. The peer review stage is required ti apply for cost-share programs under the EFP.

division between themselves and the government. There are, however, many points of intersection amongst government activities and ALUS activities, which can be a confusing interface for ALUS participants and potential participants. ALUS organizers, and members of the PAC, are frequently approached by government officials who are interested in various components of ALUS, and they often have working relationships. For example, the Ministry of the Environment, the Ministry of Natural Resources, Ontario Ministry of Agriculture, Farms, and Rural Affairs and the Climate Change secretariat all have working relationships with ALUS organizers, working on activities such as the Native Grasslands Carbon Sequestration Quantification protocol. Another intersection is that ALUS is partially funded by government grants and moneys. There have been government officials that sit on the PAC, but their role is strictly advisory, and they are not voting members of the committee. Because of the potential confusion that might arise out of these interdependencies, I would suggest that having a clearly communicatable position about the separate realms of work that ALUS and the government do would be beneficial to Norfolk County Farmers.

Another way that ALUS can, and does, build confidence within the farming community is by finding allies that will build their reputation in the minds of farmers. ALUS organizers market themselves to a wide variety of groups and individuals. This rallying extends to many groups, including: government ministries, environmental commissioner of Ontario, universities, political parties (ie. NDP), Non-Governmental Organizations, farm organizations, think tanks, etc. By November 26, 2008, for example, Dave Reid and Bryan Gilvesy had spoken to 318 people in 8 different audiences, and declared that they had found great enthusiasm and support for ALUS, and identified 95 different groups as potential partners. By aligning themselves with a

wide variety of groups, they do potentially enhance their image, and perceptions of confidence, amongst potential participants in Norfolk County.

Paying close attention to enhancing perceptions of confidence in the ALUS program is important. There are many ways that ALUS could move forward on this front, as this section has identified. Working to enhance perceptions of confidence, and quelling fears of liability issues, are essential to promoting participation amongst farmers in Norfolk County.

8.4.6 Communication and Managing Expectations – Application to ALUS

ALUS organizers realize the importance of good communication with their participants. As it was discussed in Section 7.13, ALUS' twilight tours are one key mechanism by which they ensure channels of communication are open between farmers and organizations throughout the entirety of the ALUS process. The purpose of these demonstration farm tours is to enable social networking and social learning amongst their participants, and to ensure they are addressing expectations management when it comes to growing EG&S on the farm. ALUS participants generally lauded the ease with which they could communicate with ALUS organizers (Section 6.3.1), although the non-participating farmers were a little more reserved about the topic. From this divergence, I offer a few recommendations that follow for maintaining good communication in the ALUS program.

There are specific points of contention within the ALUS pilot, where there have been some communication breakdowns in the past. I would suggest that it is these areas that require attention, in order to settle the issues that can create communication issues. These include landlord/tenant issues and capacity issues. ALUS has formally recognized the problems that can arise with landlord-tenant issues, and have taken steps to address this. I would also re-emphasize

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the clarification of program objectives, as was discussed in section 8.11, as I believe that this will greatly aid in the communication with participants, potential participants, and external support.

8.5 Chapter Summary

Table 8.3 presents a summary of the critical success factors for the design and implementation of PEGS programs in Ontario. I created this table by lifting components from each critical success factor as they were explained in the first half of this chapter. The column heading for the components of these critical success factors is 'Make sure that you…'. This column is intended to demonstrate the way in which PEGS program administrators can make use of the critical success factors as more than just theoretical concepts. These are meant to be tangible actions that can be taken in addressing these critical success factors within program design and implementation. The third column is an evaluation of the Norfolk County ALUS experience in light of these critical success factors. For simplicity and clarity, the evaluation is done in check marked boxes. A more detailed evaluation is included in Appendix E. This evaluation includes a summary of what ALUS does well, what changes have taken place during the pilot, and what could be improved, in light of lessons learned.

This chapter presented what my research has found to be the six critical success factors of the design and implementation of the ALUS pilot project in Norfolk County. These were, 1- Social Capital and Trust; 2- Participatory Processes; 3- Community Capacity; 4- Program Simplicity; 5- Confidentiality; 6- Communication and Managing Expectations. Table 8.3 summarizes these critical success factors in the form of directions about what a program ought to do in order to meet each critical success factor. It includes an evaluation component of whether the ALUS program meets the stated critical success factors.

The information presented here is meant to be used as insights into the essential factors in successfully implementing PEGS programming, with emphasis on participation in these programs. The ALUS PEGS program is premised upon farmers going above and beyond their moral and legal duties to deliver EG&S on their lands. In order to secure these EG&S from private lands, and achieve high rates of participation, certain factors need to be recognized as significant. Meeting the informational and practical needs of an agricultural-environmental program requires the knowledge, experiences and willingness of farmers to participate in such a program. This chapter is meant to serve as a road-map in completing this goal.

Table 8.3: A Summary of the Critical Success Factors for the Design and Implementation of a PEGS Program in Ontario, including an ALUS Evaluation

Critical Success Factor	Make sure that you…	Does ALUS…
Social capital and Trust	- use existing relationships and networks in marketing and communicating to farmers	☑
	- include socio-emotional goods in EG&S transactions	☑
	- focus on building respect, ease of conscience, caring about community members, maintenance of reputation, etc. in program design	☑
Participatory Processes	- use some form of stakeholder analysis to ensure legitimacy of stakeholder participation	☑
	- include those stakeholders in the design and implementation process of the PEGS program	☑
	- meet the requirements for participatory processes, including: open communication and transparency, accountability for proposed actions, and a focus on a common interest	☑
Community Capacity	- build upon skills, knowledge and assets of people in the community	☑
	- consider community capacity as both an input and an outcome of a PEGS program	☐
	- draw on existing community infrastructure to fill in any programmatic gaps	☑
Program Simplicity	- keep the program as simple and easy-to-follow as possible	☑
	- are clear about program objectives	☒
	- construct the program design around whatever objectives were chosen	☒
Confidentiality	- assure participants about potential liability issues, and how these will be resolved throughout the course of their participation	☐
Communication and Managing Expectations	- regularly communicate and manage landowners' expectations.	☑

Legend: ☑ means ALUS has achieved this critical success factor

☒ means ALUS has not yet achieved this critical success factor

☐ means it is either unclear, or ALUS sometimes achieves, and sometimes does not achieve this critical success factor

Chapter 9 - Conclusion

9.1 Research Summary

The agricultural agenda in Canada has begun to recognize that agricultural lands produce environmental goods and services (EG&S). Federal and Provincial Ministers of Agriculture in Canada (News Release, 2005) have pledged their commitment to "the continued development of an ecological goods and services (EG&S) policy… and support of research pilots that meet established criteria for policy development." At this point in time, however, EG&S have had limited experience in Canada of being exchanged in markets. My research identified the critical success factors for a 'Payments for Ecological Goods and Services' (PEGS) approach for conservation programs from farmlands, and provided insight into the decision-making process of a farmer choosing whether to participate in a PEGS approach, which could support this commitment made by Canadian leaders.

My research draws on experiences incurred during a pilot phase of Alternative Land Use Services (ALUS), a mechanism to deliver EG&S in Norfolk County, Ontario. ALUS is an incentive-based program, designed in response to growing concern about the environment. This approach emphasizes a 'by-farmers, for-farmers' collaborative mechanism, local solutions and voluntary participation.

9.1.1 Economic and Sociological Problem

The critical success factors arising out of the experiences in the ALUS pilot project in Norfolk County, Ontario, are an important source of information for the design and extension of this approach. The economic and sociological problem was that the critical success factors for the design and implementation of a PEGS program were unknown.

The primary stakeholders are those individuals who organize the ALUS program in Norfolk County. But there are many other groups and individuals to whom this economic problem belongs; this list includes: the Norfolk County farmers in the pilot project, the individuals in the Ontario ALUS alliance, Delta Waterfowl, as well as the relevant civil servants working for the ministries of Agriculture and Agri-Food Canada, Environment Canada, Ministry of Environment of Ontario, and the Ontario Ministry of Agriculture, Food and Rural Affairs.

9.1.2 Economic and Sociological Research Problem

The economic and sociological research problem is that with respect to the design of PEGS approaches in Ontario, the critical success factors for farmer participation were unknown. This could adversely affect program participation, and influence the quantity and quality of EG&S provided by farmland. By addressing this unknown, I was hoping to contribute to a clearer understanding of the factors that promote successful implementation, operation, and expansion of ALUS projects. By incorporating ideas from social capital theory into my analysis, stakeholder dynamics and participation in PEGS programs could be better understood.

This thesis belongs to two classes of disciplinary research problem; it is both an ex-post and ex-ante program evaluation. It is ex-post because the pilot project in Norfolk County is already underway; it is ex-ante because the research has direct implications for the replication of the project in other locations, and the future of ALUS in Norfolk County. The research generated by this thesis can contribute to policies and informed decision-making for those involved in current and future ALUS projects. The scope of the research was bounded by location (Norfolk County, Ontario), potential participants in ALUS (farmers in Norfolk County), and temporally (2002 – present). While the findings of this research are relevant to a local scale, findings could provide insight into the future implementation of ALUS in Ontario and Canada.

9.1.3 Purpose

The purpose of my research was to identify the critical success factor(s) for implementing a PEGS program, as well as to evaluate the ALUS pilot project in Norfolk County. My hypothesis was that trust and social capital are critical success factors in eliciting participation in PEGS programs from farmlands in Ontario. The second purpose of this research was to gain insight into personal and operational decision-making characteristics that influence participation in a PEGS program.

9.1.4 Objectives

The objectives of my research were threefold. First, to synthesize the literature on trust and social capital in economics and sociology; second, to develop a conceptual framework that includes the critical success factors for participation, incorporating the concept of trust; and third, to test my model through the use of empirical evidence from experiences of the ALUS pilot project in order to recognize essential components for future success in payments for EG&S design and expansion.

9.2 Summary and Principal Findings

I used methodological triangulation to guide the ideas that emerged as the congruous points shared between the three methods that I used (in-depth interviews; focus groups interviews; and content analysis), with guidance and support from sociology and economic literature. I called these variables the critical success factors of designing and implementing a PEGS program in South-Western Ontario, with particular focus on the ALUS pilot project in Norfolk County. Chapter 2 gave a background of the ALUS approach to PEGS programming. Chapter 3 contained a literature review of social capital and trust literatures, with a focus on economics and

sociological writings. In Section 3.10.13, I specifically address the first objective of my research, which was a commentary on the integration of economic and sociology on the topics of trust and social capital. Chapter 4 laid out my conceptual framework, which was a decision-making model for participation in a PEGS program. Chapter 5 elaborated on my research strategy and methods. Chapter 6 summarized and analyzed the results from my focus groups, and Chapter 7 did the same for my in-depth interviews. Chapter 8 was a discussion of the results, which presented and explained the critical success factors from a PEGS perspective, as well as focused specifically on the ALUS pilot in Norfolk County, Ontario.

These critical success factors are what I have identified to be the factors that contribute to successful design, promotion and implementation of a PEGS program. The following six subjects have emerged from my research as the critical success factors: 1- Social Capital and Trust; 2- Participatory Processes; 3- Community Capacity; 4- Program Simplicity; 5- Confidentiality; and 6- Communication and Expectations Management.

I also theorized, and tested a conceptual framework that focused on a farmer's decision-making process when choosing whether or not to participate in the ALUS program. I found that monetary incentives, community encouragement, and a farmer's stewardship ethic were important motivators for consideration to participate in the ALUS pilot. I also found that there were a number of variables that farmers considered when choosing whether to participate in ALUS, including: ease of communication with ALUS organizers; fears of increased liability and regulatory influence; the simplicity of ALUS; the perceived disconnect between ALUS and government programming; the congruence of personal farm goals and ALUS goals; the extent to which the process was participatory; the perceived confidence in the ALUS program; and the trust in the organizers.

My research found that social and community characteristics had a significant influence on procuring participation, and also had an influence on the design and implementation in the ALUS pilot. Thus, these findings suggest that when promoting PEGS, and specifically with ALUS, there is a benefit to identifying the factors that encourage (and discourage) a farmer from participating in the ALUS process. My research generally supported the literature about trust, social capital, participatory processes, and community capacity.

The six critical success factors that came out of methodological triangulation did somewhat surprise me; my original proposition only suspected social capital and trust to be critical success factors. I had developed this proposition because of my initial interviews with ALUS organizers, as well as observations from other researchers, I had been receiving similar messages about farmers in Norfolk County being fearful or distrusting of on-farm government initiatives. ALUS was branding themselves as unique, and a new opportunity to engage the farmers in stewardship activities, and so I wanted to test whether it was the trust built into these relationships that was the critical success factor for implementing ALUS. Although I began my research with only one critical success factor in my proposition, as my research unfolded, I was lead to find five additional critical success factors. My conceptual framework, as presented in Chapter 4, did not negate the possibility of having additional critical success factors. In fact, the framework acknowledged that there were inherently many decision-making variables that could be considered in the participation in a PEGS program. Another surprise result was that the 'payment' component of PEGS was not a critical success factor to participation in these programs. The reason it was not considered a critical success factor in my research was largely due to the fact that there was not an agreement about the amount of the per acre payment. ALUS currently uses the average land rental rate of Norfolk County ($150/acre/year) as a proxy of

opportunity costs of taking land out of production. But, as Paul Guerra found (2010, forthcoming), the average payment of other PEGS programs around the world is only about $50/acre. Participants in my research were also conflicted about the necessity of payments in ensuring the provision of EG&S from farmlands all together. It is because of these conflicting opinions that payments were not considered a critical success factor for the implementation of PEGS programs, however the author recognizes their centrality to PEGS program design.

Overall, the results found in this chapter are not disconcerting. In fact, they would fit in quite nicely into a modified conceptual framework, including the six critical success factors identified in this chapter.

9.3 Policy Implications

My research was a contemporary case study in agricultural-environmental program planning. The findings add to the literature in testing theoretical concepts of trust and social capital to real experiences. It is in this way in which my results were both informed by the theories of trust and social capital, but also contributed to applying these theories to situations in which trust and social capital were critically influential. This research also makes a practical contribution to the ALUS pilot project, by providing them with an in-depth evaluation of their pilot up to this point in time, as well as offering them a specific list of advice for the present and future of the ALUS approach, found in the Appendix.

The findings from this research have documented descriptive and explanatory variables in farmer's decision-making that may be of interest to the ALUS organizers from program promotion, design and implementation perspectives. Should the goals of the organization continue to include increased farmer enrolment, this research offered some key factors that would encourage farmers to participate in the program. I have also included specific

recommendations in terms of potential changes in program principles and marketing that may reduce existing hurdles to procuring participation. Finally, the list of critical success factors that were described in my discussion chapter (chapter 8) ought to be key considerations in the evolution of the Norfolk County ALUS pilot, and in the replication or expansion of ALUS project elsewhere in Ontario.

The research also has potential application to other PEGS programs in Ontario. An evaluation of the 'lessons learned' from the ALUS approach could have an impact on participatory PEGS approaches, in terms of factors to include and not include in program design and implementation. The findings from this research support the ALUS approach as conceptually valid, and useful in empowering farmers to take ownership of the environmental changes made on their farms.

9.4 Recommendations and Limitations
9.4.1 Limitations

A general limitations of this research was the fact that it was a single case study, with a small sample size of farmers in Norfolk County included in the research. One might argue that this takes away from the representativeness of this thesis research. I do not believe, however, that this takes away from the legitimacy of my research; despite the small sample size and singularly-focused case study, my findings are useful and relevant because of the exploratory nature of my research. An exploratory approach was appropriate in this case, because of limited examples of similar case studies; ALUS is currently at a pilot stage, and there is only one ALUS program in Ontario. This focus and qualitative approach allowed me to provide a descriptive account of the social reality in one PEGS approach, which helped to uncover factors that were an impetus to successful programming. This research strategy also allowed for versatility and flexibility in my

endeavours, and allowed the social context to guide the research being undertaken. The intended scope was of the ALUS pilot project, so as to gain a better understanding of the participation-related decisions and considerations of farmers. The information presented here provided insights into the important factors for successful programming in PEGS programs at a more generalized level.

9.4.2 Recommendations For Future Research

There are a few recommendations for future research that follow from the completion of this research. The exploratory nature of this research could be enhanced with further research, as the ALUS pilot matures and evolves into the program stage. One area of further research has already been considered as my thesis is complimented by that of another master's student. Paul Guerra (2010, forthcoming) is accessing alternative policy frameworks for EG&S provision in Ontario, as well as examining the potential costs of implementing such a program.

Further research that could be pursued includes the opportunity to explore at the factors which encourage farmers to have enduring participation in ALUS. So, another recommendation for future research is examining factors for enduring participation in PEGS programs. My third recommendation would be a larger-scale study of PEGS programs in Ontario or Canada, specifically that which considers a comparison between case studies to determine the factors that enhance relative success of various PEGS programs.

The critical success factors found to be associated with enhanced participation from this research are specific to programs that make use of participatory processes. My research suggests that characteristics that encourage participation in the ALUS approach include a number of social factors, including trust and social capital, which can be accounted for in program design and implementation. The ALUS pilot project has provided an opportunity to learn from the

experiences incurred in Norfolk County. The lessons learned from this pilot can constructed as

useful advice for the design and implementation of a PEGS approach in Ontario.

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Appendices

Appendix A

1. Ethics Application – Ethics Board Approved
JESSICA ROSENBERG'S THESIS RESEARCH; M.SC. FARE;

University of Guelph Research Ethics Board (REB)
Application to Involve Human Participants in Research

Please refer to the University of Guelph Research Ethics Guidelines, found at
http://www.uoguelph.ca/research/forms_policies_procedures/human_participants.shtml before
completing and submitting this application. If you have questions about this form, please contact
the Research Ethics Coordinator, Sandra Auld at ext. 56606, or reb@uoguelph.ca.

Date: 2009-06-29   (For OR use only) Protocol#:

SECTION A – GENERAL INFORMATION

1.   Title of the Research Project:
The Provision of Environmental Goods and Services in Norfolk County: A Community Capacity
Analysis [working title]

2.   Investigator Information

	Name & position	Dept./Address	Phone No.	E-Mail
Faculty with Principal Responsibility*:	Professor Glenn Fox	FARE	519-824-4120, ext 52768.	gfox@uoguelph.ca
Faculty: Co-Investigator(s)	Jeji Varghese, Assistant Professor	Sociology and Anthropology	519-824-4120 ext. 56333	varghese@uoguelph.ca
Student: Investigator(s)	Jessica Rosenberg	FARE	519-400-8637	rosenber@uoguleph.ca
Other: Investigator(s)	Paul Guerra	FARE		pguerra@uoguelph.ca

3.   Proposed Date a) of commencement: July 10, 2009   b) of completion: August 31, 2010

Note: The commencement date should be the date the researcher expects to actually begin interacting with human participants (including recruitment). The completion date should be the date that the researcher expects that interaction with human participants, including any feedback or follow-up, will be complete.

4.   Indicate the location(s) where the research will be conducted:

- University of Guelph, Guelph, Ontario
- OMAFRA building, 50 stone road, Guelph, Ontario
- OMAFRA building, Norfolk County, Ontario
- Norfolk County Land Stewardship Council Building, Norfolk County, Ontario
- Norfolk County Farms, Norfolk County, Ontario
- Various NGO offices in Toronto, Ontario

5.   Other Research Ethics Board Approval

		Yes	No
a)	Is this a multi-centred study?	0	1
b)	Has any other institutional Ethics Board approved this project?	0	1
c)	If Yes, please provide the following information:		

Title of the project approved elsewhere:
    Name of the Other Institution:
Name of the Other Board:
Date of the Decision:
    A contact name and phone number for the other Board:
OR
    A copy of the clearance certificate / approval

		Yes	No
d)	Will any other Research Ethics Board be asked for approval?	0	1
	If Yes, please specify:		

6.   Level of the Project

Faculty Research	0
PhD Thesis	0
Masters Thesis	1
Honours Thesis	0
Class Project	0
Internship	0
Practicum	0
Other (please specify):	

7.   Funding of the Project

	Yes	No
a) Is this project currently funded?	1	0

b) Period of Funding: From 2008-09-01   To: 2010-08-31

b)   Agency or Sponsor (funded or applied for)

        CIHR:

        NSERC:

        SSHRC:

        Other (please specify):

1)   Department of Food Agricultural and Resource Economics at the University of Guelph

2)   Delta Waterfowl – 'Economics and Community Capacity Research Grant'

Note: Please specify the complete title of the funding source. For example, "NSERC Discovery Grant".

NOTE: If the funding source changes, or if a previously unfunded project receives funding, you must submit a Change Form to the Research Ethics Coordinator.

8.   Conflict of Interest

a)   Will the researcher(s), members of the research team, and/or their partners or immediate family members:

i)   Receive any personal benefits (for example a financial benefit such as remuneration, intellectual property rights, rights of employment, consultancies, board membership, share ownership, stock options etc.) as a result of or connected to this study?   Yes 0 No 1

ii)   If Yes, please describe the benefits below. (Do not include conference and travel expense coverage, possible academic promotion, or other benefits which are integral to the general conduct of research.)

N/A

b)   Describe any restrictions regarding access to or disclosure of information (during or at the end of the study) that the sponsor has placed on the investigator(s).

N/A

c)   Discuss the possibility of commercialization of the research findings.

N/A

SECTION B – SUMMARY OF THE PROPOSED RESEARCH

9.   Rationale

Describe the purpose and background rationale for the proposed project, as well as the hypotheses(is)/research questions to be examined.

Wetlands are one of the most productive ecosystems on the planet (Natural Resources Canada). However, conflicting land-use pressures threatens the continued health of wetland ecosystems in Canada. According to Natural Resource Canada's 'Atlas of Canada', agricultural expansion accounts for 85% of Canada's wetland loss since the early 19th century. Given that this conflict of land-use is occurring largely within the domain of private land ownership, the future of wetland health rests in the hands of the private landowners. Alternative Land Use Services (ALUS) is a program that attempts to address the fact that the provision wetlands, and other environmental services, are within the realm of landowner decision-making. ALUS encourages the use of private farmland for the provision of an environment service through a fee-for-service framework. Thus the ALUS concept is being tested in Norfolk County, located in South-Western Ontario.

My research will focus on the community capacity component of landowner participation in the ALUS program. I will examine the lessons learned from the pilot project of the ALUS approach to payments for ecological goods and services on private farmland. More specifically, I will examine the critical success factors of the ALUS approach that are necessary for the success, should this program expand to a provincial and national level. By filling these gaps of knowledge, I hope to contribute to a clearer understanding of the factors that can promote successful implementation, operation, and expansion of ALUS projects to a provincial and national environmental goods and services (EG&S) policy level.

Rather than specific research questions, I have three objectives to meet in this thesis research:
Objective 1: To compare, integrate and synthesize the literature on trust and social capital by critically comparing their economic and sociological conceptualizations.
Objective 2: To develop a model of the critical success factors for ALUS projects by incorporating concepts of social capital and trust into an integrated design.
Objective 3: To assess my model of the critical success factors of the ALUS program though the use of empirical evidence from the research in order to recognize the essential components for future success in project expansion.

My hypothesis is in the form of a conceptual framework, dividing different characteristics of individual participants into four types: demographic characteristics, farm-type characteristics, program characteristics, and finally, the focus of my research, community capacity characteristics. Simply, my hypothesis is that increased trust and social capital will enhance the participation, and success, of the ALUS approach to providing ecological goods and services.

10.   Methodology

Describe sequentially, and in detail, all procedures in which the research participants will be involved (e.g., paper and pencil tasks, interviews, surveys, questionnaires, physical assessments, physiological tests, time requirements etc.)

Note: Attach a copy of all questionnaire(s), interview guides or other test instruments. These should be on University of Guelph letterhead if they are intended for public dispersal.
Three research techniques that will incorporate the use of participants are described sequentially below.

1 – Participant Observation
I have been invited to group meetings (such as the Partnership Advisory Committee Meetings, ALUS alliance meetings, etc) and farm tours. I will be observing trust and social capital at these meetings. I will take notes, but I will not use any recording devices at these meetings. I have permission from the organizers to attend these meetings, and the participants will be made aware that a researcher is present so as not to make any participant uncomfortable. I will also be doing some content analysis, as I have been given the Partnership Advisory Committee meeting minutes from the past 3 years. I have permission to use the information that I have obtained from the ALUS organizers, from the organizers themselves.

2 – Face-to-Face Interviews
The first research method is semi-structured interviews. I have organized my interview participants into 5 groups: 1 – ALUS organizers; 2 – General Farm Organization leaders; 3 – ALUS adopters and non-adopters; 4 – Environmental Goods and Services Researcher (EG&S) researcher; 5 – Other organizations with environmental interests.

First, the interviews I will conduct will involve participants from the groups 1, 2, 4 and 5. These will largely be exploratory interviews, asking questions to better understand the ALUS approach and different stakeholder perspectives. These interviews should last between 1 – 2 hours, and will not consist of any paper and pencil tasks, physical assessments, physiological tests, etc. I have compiled an interview guide, from which I will draw my questions for all of my interviews (see attached). I have separated my questions by group, as each participant group will have a unique set of questions. The function of these interviews is to collect information about the critical success factors of the ALUS pilot project, as well as an enhanced understanding of the pragmatic aspects of the pilot projects. Questions will attempt to characterize perceptions, trust and other elements of social capital in reference to ALUS that are apparent within the Norfolk community.

The majority of these interviews will be conducted by both myself, and my co-investigator Paul Guerra. Both of us will have received ethical consent to conduct this research, and both of us will have consent forms to give to the participants. As well, the participants will know in advance that there are two researchers. The rationale for having two interviewers is that we are writing about different aspects of the same topic, and we have many overlapping interview participants and questions. It is more efficient for us to interview them at the same time, and because of this, we take extra care to not over-burden the participant with too many questions or other data requests.

3 – Focus Group Interview
The second type of interview is a focus group. This consists of gathering multiple participants into one room, and having a discussion-based interview. Ideally, I would like to conduct two of these interviews, both within the third group of interview participants: one focus group for ALUS adopters, one of ALUS non-adopters. I hope to better understand those factors which encourage adoption of the program, and those which discourage adoption. Insights can be developed with the communication of other participants in the interview. This interaction can

yield different information than if individuals were interviewed individually. These focus groups should last between 1 – 2 hours, and an additional task that I might request from these participants is filling out a short questionnaire with some questions pertaining to demographic characteristics and farm type characteristics. My specific attention to confidentiality issues is discussed below.

Once again, these focus group interviews will be conducted by both myself, and my co-investigator Paul Guerra. One of us will be the facilitator, the other will focus on note-taking, to ensure that these groups run as smoothly as possible. Again, both of us will have received ethical consent to conduct this research. It is often recommended to use two interviewers for focus group research, as it is quite difficult to focus both on note-taking and facilitating.

11.   Experience

What is your experience with this kind of research?

Upon entering this graduate degree, I had little experience conducting qualitative, case-study research. I was encouraged to take ANTH*6140 Qualitative Research Methods to achieve a better theoretical understanding about proper qualitative research techniques. In this class, coursework was centered around doing a research project, which included achieving ethics approval, doing a qualitative study proposal, conducting qualitative research using three qualitative techniques three times each, as well as writing up a final report. These qualitative techniques were participant observation, semi-structured face-to-face interviews, and a survey-questionnaire instrument. Throughout this research process, I became familiar with the proper ethical etiquette of consent forms and post-interview approval.

Moreover, I have conducted a literature review on the topic of qualitative research methods, to familiarize myself with qualitative methods of inquiry and specifically case study research. . Also, I will draw input from Jeji Varghese, Sociology and Anthropology, my co-advisor who has extensive experiences with the use of case studies and qualitative methods.

12.   Participants

Describe the number of participants and important characteristics (such as age, gender, location, affiliation, etc.)
Number of Interviews
I intend to interview each participant from four of the participant groups at least once. Participants from the ALUS organizers group, I consider key informants. With these key informants, I will have an iterative interviewing process, whereupon only small portions of the interview guide will be covered at each meeting, for a number of reasons. First, these repeated meetings facilitate mutual trust to form between interviewer and participant. Second, the key informants have expressed their desire to feel included and to be a part of this research process, so by interviewing them multiple times, I can facilitate this ambition. Finally, as these key informants have been intricately associated with the ALUS concept, they have many stories and insights to share about their experience, and this requires a longer interview session than with my other participants. Thus, multiple interviews can help to cover all of the information that these

participants have to share with me. The table below summarizes the number of interviews that I expect to conduct within each group of interview participants.

Table: Number of Interviews Expected within Each Group of Interview Participants
Groups to Interview   Number of Interviews Expected
ALUS organizers   •   15 – 20, approximately 5 interviews per person over the course of the research period.
General Farm Organizations •   3 – 4
Norfolk County Residents   •   One-to-one: 15 – 20
•   Focus Groups: 2 – 3; consisting of 6 – 14 individuals each
EG&S researchers   •   2 – 3
Other organizations (government and NGOs), with environmental interests•   5 - 10

13.   Recruitment

a)   Describe how and from what sources the participants will be recruited, including any relationship between the investigator(s) and participant(s) (e.g., instructor-student; manager-employee).

Note: Attach a copy of any poster(s), advertisement(s) or letter(s) to be used for recruitment.

The participants will be contacted by email, telephone, or in-person through recruitment at ALUS town-hall type meetings. They will be identified through their public affiliation with their association. I do not expect there to be any relationship between the investigator and participants. At this point in time, I do not have any posters or advertisements to be used for recruitment. As for the adopter and non-adopter participants for the focus groups, I will also attempt to recruit them from ALUS meetings. This might be more difficult for the non-adopters, because fewer non-adopters attend these meetings. Depending on the circumstances, I may request the names of non-adopters using a snowball sampling technique, if the General Farm Organization leader is at liberty to do so.
If farm organizations are not able to release the contact of information according to their privacy policies, then they may be requested to send out a recruitment notice on the part of our project.

b)   How and where will you contact these participants?

The participants will initially be contacted by email, telephone or at town hall meetings. These meetings occur at different locations in Ontario, mostly in Norfolk County. The interview itself will be conducted in a location most convenient for the participant, but I also have secured a location in Norfolk County for interviews to be conducted: a municipal office has kindly lent use of their building as an interview-locale. Any further communication between the investigator and participants for the purposes of reviewing the evidence and case study report will be through email or over the telephone.

c)   Time required of participants: 1 - 2 hour(s) on 1 occasion(s) for most participants. For key informants, 1 – 2 hours on approximately 5 occasions.

The interview is expected to take between 1 to 2 hours. I expect to only conduct the interview at one meeting.

Yes   No
d)   Are participants proficient in the language in which the survey is being conducted?
1   0
        If not, is translation available? N/A

14.   Compensation
a)   Will participants receive compensation for participation?   Yes   No
i)   Financial   0   1
ii)   Non-financial   0   1

b)   If Yes to either i) or ii) above, please provide details.

N/A

c)   If participants choose to withdraw, how will you deal with compensation?

N/A

SECTION C – DESCRIPTION OF THE RISKS AND BENEFITS OF THE PROPOSED RESEARCH

15.   Possible Risks

a)   Indicate if the participants might experience any of the following risks: Yes   No

i)   Physical risk (including any bodily contact or administration of any
substance)?   0   1

ii)   Psychological risks (including feeling demeaned, embarrassed worried
or upset)?   0   1

iii)   Social risks (including possible loss of status, privacy and/or reputation)?
                                                                    0   1

iv)   Is there any deception involved?
0   1

v)   Are any possible risks to participants greater than those the participants
might encounter in their everyday life?
0   1

b)   If you answered Yes to any of points i) through v) above, please explain the risk.

N/A

c)   Describe how the risks will be managed (including an explanation as to why alternative approaches could not be used).

N/A

16.   Possible Benefits

Discuss any potential direct benefits to the participants from their involvement in the project. Comment on the (potential) benefits to the scientific community/ society that would justify involvement of participants in this study.

One potential benefit to the farmers is the critical thought process about environmental management decisions. Another, more general benefit, is to both the fields of economics and sociology about the advancement of knowledge about the building of trust and social capital in communities, and on the emergence of markets for ecological goods and services. The interdisciplinary approach that I am utilizing could allow for a dialogue between two more disparate fields of study. Finally, by outlining the critical success factors of the ALUS approach to delivering environmental goods and services, any future endeavours of expansion of the ALUS approach to the provincial and national level could be greatly facilitated through a focus on those factors that are critical for their success.

SECTION D – THE INFORMED CONSENT PROCESS
17.   The Consent Process

a)   Describe the process that the investigator(s) will be using to obtain informed consent, including a description of who will be obtaining the informed consent. If there will be no written consent form, explain why.

The investigator will obtain informed consent from participants by providing a hard copy of an information sheet for participant's future reference, giving participants an opportunity to review the document, verbally reviewing the information at the beginning of the interview and asking participant to sign the Consent Form if they agree to being interviewed. They will have the opportunity to verbally consent to having the interview digitally recorded at the same time. A copy of the three informed consent forms are attached.

For information about the required elements in the letter of information and the consent form, please refer to "Instructions for the Preparing Information and Consent Letters" and the sample consent form available at http://www.uoguelph.ca/research/forms_policies_procedures/human_participants.shtml.

Note: Attach a copy of the Letter of Information (if applicable), the Consent Form (if applicable), the content of any telephone script (if applicable) and any other material which will

be used in the informed consent process. If the document will be made public, please ensure that it is on University of Guelph letterhead.

The letter of consent is attached.

b)   Will the information provided to the participants be complete and accurate?
Yes 1   No 0

If no, please describe the nature and extent of the deception involved. Include how and when the deception will be revealed, and describe the specialized training of the person who will administer this feedback. It is recommended that participants have the opportunity to sign a second consent form, following debriefing when the deception is revealed, to ensure a fully informed consent.
Note: Attach a copy of the debriefing feedback and, if necessary, a copy of the second consent form on University of Guelph letterhead.

There is no deception involved in this project.

18.   Consent by an authorized party
If the participants are minors or for other reasons are not competent to consent, describe the proposed alternate source of consent, including any permission / information letter to be provided to the person(s) providing the alternate consent.

Only participants over the age of 18 will be selected for the study.

19.   Alternatives to prior individual consent

If obtaining individual participant consent prior to starting the research project is not appropriate for this research, please explain and provide details for a proposed alternative consent process.

Participant consent will be obtained prior to the interviews.

20.   Participant feedback

Explain what feedback/ information will be provided to the participants after participation in the project. (For example, a more complete description of the purpose of the research, or access to the results of the research).

      Note: Please provide a copy of the written information, if applicable.

The participant will be thanked for their time. Access to the results of the research and the final report will be made available to interested participants. Participants will have the option to provide their contact information for the purpose of receiving the results of the study.

21.   Participant withdrawal

a)   Describe how the participants will be informed of their right to withdraw from the project. Outline the procedures that will be followed to allow the participants to exercise this right.

The participant will be informed of their right to withdraw from the project in the letter of consent. Either a verbal or written statement from the participant stating that they would like to withdraw from the project will be sufficient.

b)   Indicate what will be done with the participant's data and any consequences for the participant of withdrawing from the study.

If the participant would like to withdraw from the study, the investigators will engage in communication with the participant about what is to be done with the participant's data, whether it is still useable in the report or completely deleted/destroyed. Upon request, the participant's data will be deleted or destroyed and not used in the study. There will not be any consequences for the participant.

c)   If the participants will not have the right to withdraw from the project, please explain.

The participants do have the right to withdraw.

SECTION E – CONFIDENTIALITY

22.   Ensuring confidentiality

		Yes	No
a)	Will all participants be anonymous?	0	1
b)	Will all data be treated as confidential?	1	0

Please note the difference: Participants' identity/data will be confidential if an assigned ID code or number is used, but it will not be anonymous. Anonymous data cannot be traced back to an individual participant.

c)   Describe the procedures to be used to ensure anonymity of participants and/or confidentiality of data both during the conduct of the research and in the release of its findings.

All data collected from interviews will be treated as confidential, unless I receive permission from every interview participant in each group for me to use their name and/or title. If this is the case, then data will not be treated as confidential within that group. The participant will be informed that the data will be used in a master's thesis which will be publicly available, and potentially published in a journal. The consent form has a section that addresses confidentiality, and it includes a question at the end asking whether or not the participant wishes to have their identity/data be confidential. If it is the case that one or more participants per group requests confidentiality, then names will not be included in any part of the work that is published or presented; instead they will be written up as another identifier that does not directly indicate their identify, e.g,. Norfolk County farmer or environmental NGO leader. Moreover, to ensure

confidentiality in the research process, I will use codes rather than personal identifiers when I am transcribing my data. I will keep the names that are associated with the codes in a separate file, which will be password protected. Only in the final stage of my thesis will personal identifiers be re-introduced, and that is only if I have permission from the entire participant group to use their names.

During the research project, personal data will be contained on a computer to which only the principle researcher will have access to. The computer is password protected. In addition any folders containing personal or confidential data will have password protection. The data will only be accessed by the researcher (myself) and my advisors.

d)   Explain how written records, video/audio tapes and questionnaires will be secured, and provide details of their final disposal or storage.

Written records (from both the participant observation and the interviews) and audio tapes (from the interviews) will all be kept on password-protected audio files my computer (which is also password protected). This information will not be available to the public. Handwritten notes, will be stored for the duration of my research in a locked cabinet at the department, and stored there for up to 5 years. The records will be shredded and recycled upon completion of the study. And finally, as mentioned above, I will use codes rather than personal identifiers when I am transcribing my data.

e)   If participant anonymity or confidentiality is not appropriate to this research project, explain, providing details of how all participants will be advised of the fact that data will not be anonymous or confidential.

The participants will be informed by the Consent to Participate in Research letter that the level of confidentiality is decided by their discretion. The participant will be informed that the information they reveal will be made publicly available in a master's thesis and potentially conferences and journals. The participant can choose not to have their name appear in published or presented work. Please refer to the consent forms for exact wording of the confidentiality component.

SECTION F – MONITORING ONGOING RESEARCH

23.   Annual Review and Adverse Events

a)   Minimum protocol review requires the completion of a "Renewal/Completed Status Report" at least annually. Indicate whether any additional monitoring or review would be appropriate for this project.

Note: It is the investigator's responsibility to notify the REB using the "Renewal/Completed Status Report" when the project is completed, or if it is cancelled. The form is available at http://www.uoguelph.ca/research/forms_policies_procedures/human_participants.shtml.

The research will be completed in the period of approximately a year. A Renewal/Completed Status Report will be submitted a year after the submission of this initial application, should this research take more than one year.

b)   Adverse events (unanticipated negative consequences or results affecting participants) must be reported to the Research Ethics Board and the Research Ethics Coordinator as soon as possible.

24.   Additional Information

(Use an additional page if more space is required to complete any sections of the form, or if there is any other information relevant to the project that you wish to provide to the Research Ethics Board.)

SECTION G – SIGNATURES
Responsible Faculty Assurance:

I¬¬, _____ [Glenn Fox] have the ultimate responsibility for the conduct of the study described in this application including my responsibilities as an advisor to any students involved in this project. I have read and am responsible for the content of this application. If any changes are made in the above arrangements of procedures, or adverse events are observed, I will bring these to the attention of the Research Ethics Coordinator.

                                    (yyyy-mm-dd)
Signature   Date

I¬¬, _____ [Jeji Varghese] have the ultimate responsibility for the conduct of the study described in this application including my responsibilities as an advisor to any students involved in this project. I have read and am responsible for the content of this application. If any changes are made in the above arrangements of procedures, or adverse events are observed, I will bring these to the attention of the Research Ethics Coordinator.

                                      (yyyy-mm-dd)
Signature   Date

2- Key Informant Interview Consent Form

CONSENT TO PARTICIPATE IN RESEARCH
You are asked to participate in a research study conducted by Jessica Rosenberg, Dr. Glenn Fox, from the department of Food, Agricultural, and Resource Economics and Dr. Jeji Varghese from the department of Anthropology and Sociology at the University of Guelph. This research will contribute to the Master's Thesis of Jessica Rosenberg. The title of this research is: The Provision of Environmental Goods and Services in Norfolk County - A Community Capacity Analysis [working title]. This research is funded by an 'Economic and Community Capacity'

research grant from Delta Waterfowl and the department of Food, Agricultural and Resource Economics at the University of Guelph.

If you have any questions or concerns about the research, please feel free to ask me. If you wish to contact me later, you can reach me at rosenber@uoguelph.ca. Or, you can contact my advisors, Dr. Glenn Fox at (519) 824-4120 ext. 52768 or gfox@uoguelph.ca; or Dr. Jeji Varghese at 519-824-4120 ext. 56333 or varghese@uoguelph.ca.

PURPOSE OF THE STUDY
I have a couple of purposes for my study. The first is to identify the critical success factors of providing environmental goods and services with the Alternative Land Use Services (ALUS) approach. My other purpose is to better understand and interpret the concept of social capital. This is a theory that is used in understanding communities processes by economists and sociologists.

PROCEDURES
If you volunteer to participate in this study, we would ask you to do the following things:
•   Participate in approximately 4 – 6 interviews, either in person or by phone.
•   The participant is asked to devote approximately two hours to the study, on 4 – 6 occasions.
•   The interview may be recorded using an audio tape recording device to keep an accurate record of what was said in the meeting
•   The findings from this study will be made available to the participants if requested by the participant

POTENTIAL RISKS AND DISCOMFORTS
We do not feel that there are any serious risks for your participation. Some questions may be of a personal nature asking participants about your personal views and attitudes on such issues as the environment, the Norfolk community, and ALUS. If at any point the participant is uncomfortable or unable to continue with the study, you may withdraw.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY
This study will provide the critical success factors of the ALUS organization, information about the agricultural and environmental policies and other variables that could inform a future 'payments for ecological goods and services policy' in Ontario and Canada. Participants will not receive payment for participating in this study.

CONFIDENTIALITY
It is up to you whether you would like your identity to be confidential. Unless you would like your identity to be confidential, your name and/or title might be used my thesis, and any other published editions of my research. If you request confidentiality, your name and other personal identifiers will be removed in all write-ups of my research, and any data from this interview will use a code instead of your name. At the bottom of this form, you can check off whether or not you wish to have your identifiers removed from the write-up of this research.

By agreeing to participate in this study you acknowledge that the information you provide may be made public in a master's thesis, conferences and journals. If permission is granted, interviews may be recorded. All recordings and digital documents will be password protected, and only accessible by the researcher and my advisors. Any documents or records will be stored in a locked place and destroyed after five years. Participants have the right to review transcriptions, should they request it.

PARTICIPATION AND WITHDRAWL
You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

RIGHTS OF RESEARCH PARTICIPANTS
You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claim, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have any questions regarding your rights as a research participant, contact:

Research Ethics Coordinator
University of Guelph
437 University Centre
Guelph, ON, N1G 2W1
Telephone: (519) 824-4120, ext. 56606
E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I give permission to the researchers to use my name and/or personal identifiers in the write up of the research   Yes 0 No 0

I have read the information provided for the study "The Provision of Environmental Goods and Services in Norfolk County - A Community Capacity Analysis [working title]" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____
Name of Participant (please print)

_____

Signature of Participant

_____

Date

SIGNITURE OF WITNESS

_____

Name of Witness (please print)

_____   _____

Signature of Witness   Date

3 – In-Depth Interview (Except Key Informant) Consent Form
CONSENT TO PARTICIPATE IN RESEARCH
You are asked to participate in a research study conducted by Jessica Rosenberg, Dr. Glenn Fox, from the department of Food, Agricultural, and Resource Economics and Dr. Jeji Varghese from the department of Anthropology and Sociology at the University of Guelph. This research will contribute to the Master's Thesis of Jessica Rosenberg. The title of this research is: The Provision of Environmental Goods and Services in Norfolk County - A Community Capacity Analysis [working title]. This research is funded by an 'Economic and Community Capacity' research grant from Delta Waterfowl and the department of Food, Agricultural and Resource Economics at the University of Guelph.

If you have any questions or concerns about the research, please feel free to ask me. If you wish to contact me later, you can reach me at rosenber@uoguelph.ca. Or, you can contact my advisors, Dr. Glenn Fox at (519) 824-4120 ext. 52768 or gfox@uoguelph.ca; or Dr. Jeji Varghese at 519-824-4120 ext. 56333 or varghese@uoguelph.ca.

PURPOSE OF THE STUDY
I have a couple of purposes for my study. The first is to identify the critical success factors of providing environmental goods and services with the Alternative Land Use Services (ALUS) approach. My other purpose is to better understand and interpret the concept of social capital. This is a theory that is used in understanding communities processes by economists and sociologists.

PROCEDURES
If you volunteer to participate in this study, we would ask you to do the following things:
• Participate in an interview, either in person or by phone
• The participant is asked to devote 1 – 2 hours to the study

• The interview may be recorded using an audio tape recording device to keep an accurate record of what was said in the meeting
• The findings from this study will be made available to the participants if requested by the participant

POTENTIAL RISKS AND DISCOMFORTS
We do not feel that there are any serious risks for your participation. Some questions may be of a personal nature asking participants about your personal views and attitudes on such issues as the environment, community, and ALUS. If at any point the participant is uncomfortable or unable to continue with the study, you may withdraw.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY
This study will provide information on the ALUS organization, agricultural and environmental policies and other variables that could inform a future 'payments for ecological goods and services policy' in Ontario and Canada. Participants will not receive payment for participating in this study.

CONFIDENTIALITY
It is up to you whether you would like your identity to be confidential. Unless you would like your identity to be confidential, your name and/or title might be used my thesis, and any other published editions of my research. If you request confidentiality, your name and other personal identifiers will be removed in all write-ups of my research, and any data from this interview will use a code instead of your name. At the bottom of this form, you can check off whether or not you wish to have your identifiers removed from the write-up of this research.

By agreeing to participate in this study you acknowledge that the information you provide may be made public in a master's thesis, conferences and journals. If permission is granted, interviews may be recorded. All recordings and digital documents will be password protected, and only accessible by the researcher and my advisors. Any documents or records will be stored in a locked place and destroyed after five years. Participants have the right to review transcriptions, should they request it.

PARTICIPATION AND WITHDRAWL
You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.
RIGHTS OF RESEARCH PARTICIPANTS
You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claim, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have any questions regarding your rights as a research participant, contact:

Research Ethics Coordinator

University of Guelph
437 University Centre
Guelph, ON, N1G 2W1
Telephone: (519) 824-4120, ext. 56606
E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I give permission to the researchers to use my name and/or personal identifiers in the write up of the research   Yes 0 No 0

I have read the information provided for the study "The Provision of Environmental Goods and Services in Norfolk County - A Community Capacity Analysis [working title]" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____
Name of Participant (please print)

_____
Signature of Participant

_____
Date

SIGNITURE OF WITNESS

_____
Name of Witness (please print)

_____
Signature of Witness

_____
Date

CONSENT TO PARTICIPATE IN RESEARCH
You are asked to participate in a research study conducted by Jessica Rosenberg, Dr. Glenn Fox, from the department of Food, Agricultural, and Resource Economics and Dr. Jeji Varghese from the department of Anthropology and Sociology at the University of Guelph. This research will contribute to the Master's Thesis of Jessica Rosenberg. The title of this research is: The Provision of Environmental Goods and Services in Norfolk County - A Community Capacity Analysis [working title]. This research is funded by an 'Economic and Community Capacity' research grant from Delta Waterfowl and the department of Food, Agricultural and Resource Economics at the University of Guelph.

If you have any questions or concerns about the research, please feel free to ask me. If you wish to contact me later, you can reach me at rosenber@uoguelph.ca. Or, you can contact my advisors, Dr. Glenn Fox at (519) 824-4120 ext. 52768 or gfox@uoguelph.ca; or Dr. Jeji Varghese at 519-824-4120 ext. 56333 or varghese@uoguelph.ca.

PURPOSE OF THE STUDY
I have a couple of purposes for my study. The first is to identify the critical success factors of providing environmental goods and services with the Alternative Land Use Services (ALUS) approach. My other purpose is to better understand and interpret the concept of social capital. This is a theory that is used in understanding communities processes by economists and sociologists.

PROCEDURES
If you volunteer to participate in this study, we would ask you to do the following things:
• Participate in a focus group, consisting of approximately 6 – 14 people.
• You will be assigned to a group based on whether or not you have adopted the ALUS pilot project on your farm.
• In the group, everyone will be discussing whether or not they have had experiences with ALUS, and their opinions about environmental goods and services delivered from rural land.
• The meeting will last about 2 hours.
• The group meeting will be recorded using an audio tape recording device to keep an accurate record of what was said in the meeting
• We may want to keep in touch afterwards, a follow-up interview may be requested.
• The findings from this study will be made available to the participants if requested by the participant

POTENTIAL RISKS AND DISCOMFORTS
We do not feel that there are any serious risks for your participation. Some questions may be of a personal nature asking participants about your personal views and attitudes on such issues as the environment, their community, and ALUS. These subjects will be discussed in a group setting, however all participants will be asked not to disclose anything said within the focus group meeting. If at any point the participant is uncomfortable or unable to continue with the study, you may withdraw.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

This study will provide the critical success factors of the ALUS organization, information about the agricultural and environmental policies and other variables that could inform a future 'payments for ecological goods and services policy' in Ontario and Canada. We also think that discussing your on-farm experiences with your community can benefit everyone by sharing stories and hearing experiences similar to your own. Participants will not receive payment for participating in this study.

CONFIDENTIALITY
It is up to you whether you would like your identity to be confidential. Unless you would like your identity to be confidential, your name and/or title might be used my thesis, and any other published editions of my research. If you request confidentiality, your name and other personal identifiers will be removed in all write-ups of my research, and any data from the focus group will use a code instead of your name. At the bottom of this form, you can check off whether or not you wish to have your identifiers removed from the write-up of this research. It should be noted that while all members of this focus group are signing the consent form requesting confidentiality of the other members in the focus group, there is a chance that other group members might break this confidentiality. Also, participants should not disclose the views of others that are not participating in this focus group.

By agreeing to participate in this study you acknowledge that the information you provide may be made public in a master's thesis, conferences and journals. If permission is granted, interviews may be recorded. All recordings and digital documents will be password protected, and only accessible by the researcher and my advisors. Any documents or records will be stored in a locked place and destroyed after five years. Participants have the right to review transcriptions, should they request it.

PARTICIPATION AND WITHDRAWL
You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

RIGHTS OF RESEARCH PARTICIPANTS
You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claim, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have any questions regarding your rights as a research participant, contact:

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Telephone: (519) 824-4120, ext. 56606

E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE
I give permission to the researchers to use my name and/or personal identifiers in the write up of
the research   Yes 0 No 0

I understand that the information shared in the focus group meeting today is not to be shared
with anyone outside of this group.   Yes 0 No 0

I have read the information provided for the study "The Provision of Environmental Goods and
Services in Norfolk County - A Community Capacity Analysis [working title]" as described
herein. My questions have been answered to my satisfaction, and I agree to participate in this
study, and have given permission to be audiotape recorded. I have been given a copy of this
form.

_____
Name of Participant (please print)

_____
Signature of Participant

_____
Date

SIGNITURE OF WITNESS

_____
Name of Witness (please print)

_____   _____
Signature of Witness   Date

Appendix B

Table 1: Summary of Advantages and Disadvantages of Focus Group Research

Advantages

i.   1-   Provides data from a group of people.
- quickly, and
- less costly than if each individual were interviewed separately

i.   2-   Direct interaction with respondents, including opportunities for clarifications and qualifications, follow-up questions, probing.

ii. 3-   Opportunity to observe nonverbal responses

iii. 4-   Open response format: can provide large and rich amount of data in the respondents' own words.

iv. 5-   Allows for respondents to react to and build upon the responses of other group members.
- Synergistic effect.
- Potential snowball effect – where a comment can trigger a chain of responses, uncovering the production of ideas that might not have been uncovered in individual interviews.
- Can have a stimulation effect - where a level of excitement gets the group talking.
- There can be a sense of security in the respondents situation, where if his/her feelings are not greatly different from those of his peers, as he/she can expose an idea without being forced to defend, follow through, or elaborate upon it.

i.   6-   Flexibility - Can examine a wide range of topics, with different types of people.

ii. 7-   A research tool that does not assume literacy or scholarly competence.

iii. 8-   Spontaneity - since there isn't direct pressure on each individual to answer each question.
- Participants can speak out when they have a definite position on an issue, and not because a question requires a response.

i.   9-   Structural control – the moderator has the opportunity to reopen topics that received too shallow a discussion when initially presented.

Disadvantages

i.   1-   Can have a low level of generalizability due to small number of participants relative to populations

ii. 2-   Interaction of the respondents with one another, and the researcher can have undesirable effects as well, such as bringing in previous power dynamics and relationship structures..
- The responses from members of the group are not independent of one another, can introduce bias
- Some participants can be dominant, while more reserved group members may be hesitant to talk.

i.   3-   Open-ended nature of responses can make the summarization and interpretation of results difficult.

ii. 4-	Moderator may bias results by knowingly or unknowingly providing unnoticed clues about what types of responses and answers are desirable.

Note: This table was produced from information from Stewart and Shamdasani (1990)

Appendix C

1 - Participant Focus Group Guide

Research Goals
- I am trying to find out whether a higher trust level can offset low profit from adopting ALUS. In other words, is trust enough to change a farmer's decision from not participating to participating in the ALUS pilot?
- Test conceptual framework: I'd like to find out how the experiences of individuals who do participate differ from those who chose not to participate, especially in terms of trust and community.

Agenda and Questions

Participants arrival and individual surveys
- Have people sign in, give them a name tag, lunch and an individual survey
- Have them sign the ethics form
- Let each participant know individually know that I will be tape recording the conversation, and if they are uncomfortable, they can leave before we begin the focus group

Jess' Intro to ALUS and purpose of Focus Group
- Brief explanation of ALUS
- Introduce agenda
- Reassure confidentiality and the value of all opinions and empathy for respondents
- Encourage multiple viewpoints:
    - If you find yourself having a totally different set of experiences, or a different opinion than the rest of the group, I'd like to hear it, since you will be representing a groups of people out in the real world who just didn't happen to be in the group today to support your view.
    - We are going to discuss a program that affects all of you. Don't worry about what I or the other people in the group think of your answers, we're here to exchange opinions and ideas.
- Introduce Paul

Introductions/ice-breaker [5 minutes]
- Have everyone say their name, and their favourite thing to do over the holidays.

Understanding of ALUS (knowledge/information)
1. First, I'd like if you could give me some general details of your experiences with ALUS so far. [10 minutes]
- Tell me about where you first heard about ALUS.
    - Where were you?

- At an ALUS meeting? Speaking with a neighbour?
- Speaking with an ALUS organizer? Who?
- Did your perceptions of ALUS change after you signed on? (ie. of the program, of what it can do on your farm, of the people who work for ALUS?)
  - In what way?
  - What is the best way to reach farmers with information about ALUS?

2. I'd like everyone to write down five words that first come to your mind in describing the ALUS program. [5 minutes]
- Give everyone a few moments to think of their words
- Have them read out their top two/three.
- Can you tell me a few things you know about the way ALUS operates?

ALUS Program Design (Critical success factors)
3. I'd like for you to describe what encouraged you to sign up for ALUS. What was the draw of the program for you? [10 minutes]
- Can you tell me about why you decided to sign up?
- What were some of the things you considered?
- What types of things motivated you to sign up for ALUS:
- If you need to give examples, these could include: money, moral reasons, environmentally conscious, neighbours were doing it, you thought it was a good program, you liked the organizers, you think that the philosophy is good, farmers should be paid for EG&S, etc)

OR

- I'm going to say a couple of things that might've encouraged you to participate in ALUS; Raise your hand if this applies to you:
  - Profit gains or losses from participation
  - Marketing possibilities
  - Communication with the organizers was good/easy
  - The twilight tours
  - I was confident in the environmental services being planted/grown/converted on my farm
  - I trusted the organizers and coordinator
  - What other things did you consider (have everyone write something down, name your top 1 – 3 choices)
- What types of things did you consider in your decision to participate in ALUS?

4. How many participate in other programs that deliver ecological services on your farm? (Have them raise their hands) [5 minutes]
→ **Now, keep your hands up if you participate in program in addition to ALUS and the EFP.**
- Is anyone comfortable sharing their experiences with these programs?

- Can you tell me about if they are different from the ALUS program, and why?
- Would any of you participate in other on-farm environmental programs in the future? Why/why not?

5. Show ALUS principles written out on poster [5 - 10 minutes]
- Introduce the poster as the ALUS principles
- I'd like everyone to reflect about these principles for a moment. Then I'd like you to pick your top three most important pricinples, for you personally.
    - Are these principles necessary for you continued participation in ALUS?
    - Are there any principles that you think are missing?
    - Are any of these principles what make ALUS different than other on-farm programs?

6. Since you signed on with ALUS, have you changed the amount of land enrolled in ALUS? [5 - 10 minutes]
- Have you added more acres or taken away some acres of land in the ALUS pilot?
- Describe the timeframe from when you heard about ALUS to when you decided to participate.
- Do you think that you'll continue with the ALUS project on your farm…
    - After the pilot ends?
    - What if the payments stop? Or are less permanent. Would you retain what has already been planted/converted?
    - What elements factor into the decision to retain the ALUS approach on your farm?
- Have you taken risks in the past with respect to new environmental approaches to farming?

10-minute break

ALUS Program Design (Social Capital Questions) [5 minutes]
7. I'd like to understand which people influenced your decision to take on ALUS.
- Did any of your neighbours participate in ALUS and encourage you to learn more about it?
    - Did you discuss ALUS with your neighbours?
- Did any public figures or organization endorse ALUS?
    - Did this encourage you to look into ALUS?
- Did you children encourage you in any way?
    - Did they discuss ALUS with you?

ALUS Program Design (Trust questions) [15 minutes]
8. I'd like to discuss the idea of trust for a few minutes.
- Can you tell me about what you see as three attributes of a trustworthy person?
    - Do these attributes apply to ALUS representatives?

- o Why/why not?
- Has anyone had an experience where you were required to confide confidential information with ALUS?... Can you tell me about it?
  - o Did you think that it would be kept confidential?
  - o Were you at ease revealing this information?
- Are you comfortable having an ALUS associate come onto your farm?
  - o Anytime?
  - o Without warning?
  - o With them bringing other people onto your farm?
  - o Why?
- Does anyone have any stories about when they first met with an ALUS representative?
  - o Was there a period of time before you trusted ALUS and the people who worked within ALUS?
    Can you tell me about the development of that relationships?
  - o Was there a specific experience that made you trust them?
- How often do you meet with an ALUS representative?
  - o What types of things do you talk about?
  - o Describe the interactions with ALUS coordinators: [pleasant, easy, comfortable, uncomfortable, lack of understanding…]
  - o Do they respect your concerns?
  - o Do you think that ALUS organizers have treated you fairly?

9. Now, I'd like you to compare these experiences to programs delivered by the government. [5 minutes]
- Have you participated in programs delivered by government agencies?
- Can you tell me about this experience?
  - o Is it like or unlike your experiences with ALUS?
  - o In what way is it the same/different?
- Could anyone tell me about a situation where you were interacting with government officials about land-use changes on your farm..
  - o did they treat you fairly?
  - o Did they respect your concerns?
- What do you think of the EFP?
  - o Do you think it is sufficient in terms of auditing farmers in the protection of the environment?
  - o Does it enough provide enough environmental services? Does it provide too much?
  - o Do you participate?
  - o Would you have participated before ALUS?
- Do you think that there are good incentives in place to manage land environmentally, other than ALUS?
  - o What programs do you consider to meet this environmental goal?

ALUS Program Design (Community capacity questions)
10. Importance of Community-based programs [10 minutes]
- How likely are you to participate in a program that is…

- created and implemented at a local or community level?
- created and implemented at a provincial level?
- created and implemented at a national level?
- Imported from another county?
- What makes the implementation and design of a community-based program different than one imported from elsewhere?

- Do you think that programs delivered at the community level have enough resources to run properly?
  - What are some issues that you would foresee in a community-run program?
  - Do you think these exist in the ALUS model?
  - What are some of the benefits from having a community-based/delivered program?
  - Do you think these exist in the ALUS model?

Your farm goals (Synergy between individual goals and ALUS goals)
11. At the bottom of the papers in front of you, there is a list of farm goals. I'd like you to check off all that apply to you: [10 minutes]
➔ **the papers will have the following options:**
- wealth and financial security
- environmental protection and improvement
- to be a well respected member of the community and social approval
- personal integrity and high ethical standards
- balance of work and lifestyle
- to survive and grow
- to farm well and be recognized for this
- to improve the physical state and appearance of the farm
- to earn enough profit to be able to improve and develop the farm
- to have good quality animals and crops
- Can you tell me about if ALUS helps or stops you from reaching these goals?
  - In what ways?

Perceptions about ALUS (Confidence/perceptions of success of ALUS/Reputation)
12. Do you think ALUS has been successful so far, as a pilot? [5 - 10 minutes]
- To you, what makes a program successful?
- How would you describe a successful program to a friend/neighbour?
- How confident are you that ALUS will continue to exist for 10 years? 20 years?
- For those of you who are very confident – how does your impression of the future of ALUS affect your decision to participate?
- For those of you who are not very confident – how does your impression of the future of ALUS affect your decision to participate?

<u>**2 - Non-Participant Focus Group Guide**</u>

Research Goals
- I am trying to find out whether a higher trust level can offset low profit from adopting ALUS. In other words, is trust enough to change a farmer's decision from not participating to participating in the ALUS pilot?
- I am trying to understand why these farmers decided NOT to participate in ALUS.
- test conceptual framework: I'd like to find out how the experiences of individuals who do participate differ from those who chose not to participate, especially in terms of trust and community.

Agenda and Questions

Participants arrival and individual surveys
- Have people sign in, give them a name tag, lunch and an individual survey
- Have them sign the ethics form
- Let each participant know individually know that I will be tape recording the conversation, and if they are uncomfortable, they can leave before we begin the focus group

Jess' Intro to ALUS and purpose of Focus Group
- Brief explanation of ALUS
- Introduce agenda
- Reassure confidentiality and the value of all opinions and empathy for respondents
- Encourage multiple viewpoints:
    o If you find yourself having a totally different set of experiences, or a different opinion than the rest of the group, I'd like to hear it, since you will be representing a groups of people out in the real world who just didn't happen to be in the group today to support your view.
    o We are going to discuss a program that affects all of you. Don't worry about what I or the other people in the group think of your answers, we're here to exchange opinions and ideas.
- Introduce Paul

Introductions/ice-breaker [5 minutes]
- Have everyone say their name, and their favourite thing to do over the holidays.

Introduction (knowledge/information about ALUS) [10 minutes]
1. First, I'd like to know who here has heard about the ALUS program?
Have you heard about the ALUS program?
- Of those who have:
    o Where did you hear about it?

- Ie. at an ALUS meeting? Speaking with a neighbour?
- Speaking with an ALUS organizer? Who?
- Have you attended meetings/information sessions about ALUS have you attended?
- Where did you hear about these meetings?
- Is anyone here directly involved with ALUS proceedings?

Farm Program Marketing (Information Dissemination) [5 minutes]
2. What is the best way to get information out to farmers about new programs?
- What about ALUS→ what do you think are some of the best ways to market programs to farmers?
    - Do you think ALUS is missing potentially interested farmers if they are not doing these things?
    - Do you feel that there is all the information that you need about ALUS readily available?

Understanding of ALUS (knowledge/information about ALUS) [5 minutes]
3. Even if your first introduction to ALUS was today, do your best to describe ALUS in 3 - 5 words in writing. Write it on the piece of paper in front of you.
    - → Go around and have everyone read out 2 or three
- Can you tell me a few things you know about ALUS?

Other on-farm programs [10 minutes]
4. Have you participated in any on-farm environmental programs? OR
How many of you participate in other programs that deliver ecological services on your farm?
- Such as?
    - Ie. EFP
- Is anyone comfortable sharing their experiences with these programs?
- Have you considered making changes, environmentally, to your farm?
- In a hypothetical situation: Would you participate in on-farm environmental programs that converted some of your farm-land to produce ecosystem benefits?
    - Why or why not?

ALUS Design (Critical success factors) [10 minutes]
5. I'd like to better understand the process of deciding not to sign up for ALUS
This could be as straightforward as you didn't have enough information, or it wasn't feasible on your farm for practical reasons, or there might be more things that factored into your decision-making. Would anyone share this process with us?

- Can you describe the decision-making process?
    - Was it deliberate?
    - Was signing up for ALUS something you considered for a long time? Or was your decision immediately obvious to you?
    - Why?

**6. Can you describe some of the specific things that discouraged you to sign up for ALUS.
[15 minutes]**
- What were some of the things you considered in your decision not to sign up for ALUS?
- I'm going to say a couple of things that might've discouraged you to participate in ALUS; Raise your hand if this applies to you:
    - Profit losses from participation
    - Not enough marketing possibilities
    - Communication with the organizers wasn't sufficient
    - The twilight tours
    - I was not confident in the environmental services that would be planted/grown/converted on my farm
    - I did not trust the organizers and coordinator
    - Lack of information
    - Not a good fit for my farm type/size
    - Not a good fit with me personally
    - Issues with personalities involved with ALUS
    - Another family member didn't want to
    - Trust issues, generally
    - Or something here I didn't mention…
- have everyone write something down, name your top 1 – 3 choices

6B. Now, let me try the question from the opposite angle:
- **What are some of the things that would motivate you to participate in a program that pays for the conversion costs, and maintenance of ecosystem services on your farmland?**
    - For example, is the money the draw?
    - Would it be some kind of community pressure to sign up?
    - To be a good environmental steward?
    - You liked/respected the organizers?
    - All or none of these might apply, can you speak to them?

10 minute break

7. Show ALUS principles written out on poster [10 minutes]
- Introduce the poster as the ALUS principles
- I'd like everyone to reflect about these principles for a moment. Then I'd like you to pick your top three most important principles, for you personally.
    - Are these principles necessary for you continued participation in ALUS?
    - Are there any principles that you think are missing?
    - Are any of these principles what make ALUS different than other on-farm programs?

ALUS Design (Trust Questions)
8. I'd like to discuss the idea of trust for a few minutes   [10 minutes]

- Can you tell me about what you see as three attributes of a trustworthy person? → ask volunteers to share, don't make everyone share their answers.
  - From your experiences with the ALUS representatives, would you consider them trustworthy?
  - Why/why not?
- We talked about some of the key principles that an on-farm program needs to include for you earlier.
- [If trust was not one of them]: would you say that trust is necessary for you to participate?
  - If you did not trust the organizers of the program, would you participate?
  - Why/why not?
  - Is there something about a certain trust level that makes you participate in an on-farm program?
  - What is it about the farm that makes it different in terms of trust levels?

ALUS Program Design (Social Capital Questions)
9. I'd like to understand if there were specific people influenced your decision not to take on ALUS.   [10 minutes]
- Did any of your neighbours participate in ALUS and encourage you to learn more about it?
  - Did you discuss ALUS with your neighbours?
- Did any public figures or organization endorse ALUS?
  - Did this encourage you to look into ALUS?
- How about the organizers? Can you speak to your relationship with them?
- Would you be comfortable having an ALUS associate come onto your farm?
  - Anytime?
  - Without warning?
  - With them bringing other people onto your farm?
  - Why?
- Does anyone have any stories about when they first met with an ALUS representative?
  - Describe the interactions with ALUS coordinators: [pleasant, easy, comfortable, uncomfortable, lack of understanding…]
  - Do they respect your concerns?
  - Do you think that ALUS organizers have treated you fairly?

10. Now, I'd like to ask about your experiences with on-farm programs delivered by the government.   [10 minutes]
- Have you participated in programs delivered by government agencies?
- Can you tell me about this experience?
- Could anyone tell me about a situation where you were interacting with government officials about land-use changes on your farm..
  - did they treat you fairly?
  - Did they respect your concerns?
- What do you think of the EFP?
  - Is it efficient?
  - Does it enough provide enough environmental services? Does it provide too much?

- o Do you participate?
- o Would you have participated before ALUS?
- • Do you think that there are good incentives in place to manage land environmentally, other than ALUS?
  - o What programs do you consider to meet this environmental goal?

What Makes ALUS work (Community capacity questions)
11. Importance of Community-based program [10 minutes]
- • Can anyone tell me about if an important part of an on-farm program is that it is organized in your own community?
- • Are you more likely to participate in a program that is organized in your community compared to a program…
  - o created and implemented at a provincial level?
  - o created and implemented at a national level?
  - o Imported from another county?
  - o Why? What about the program having been created in the community makes it a better program?
- • Do you think that programs delivered at the community level have enough resources to run properly?
  - o What are some issues that you would foresee in a community-run program?
  - o Do you think these exist in the ALUS model?
  - o What are some of the benefits from having a community-based/delivered program?
  - o Do you think these exist in the ALUS model?

Your farm goals (Synergy between individual goals and ALUS goals)
12. At the bottom of the papers in front of you, there is a list of farm goals. I'd like you to check off all that apply to you.   [10 minutes]
  - o wealth and financial security
  - o environmental protection and improvement
  - o to be a well respected member of the community and social approval
  - o personal integrity and high ethical standards
  - o balance of work and lifestyle
  - o to survive and grow
  - o to farm well and be recognized for this
  - o to improve the physical state and appearance of the farm
  - o to earn enough profit to be able to improve and develop the farm
  - o to have good quality animals and crops
- • Can you tell me about if ALUS helps or stops you from reaching these goals?
  - o In what ways?

Perceptions about ALUS (Confidence/perceptions of success of ALUS/Reputation)
13. Do you think ALUS has been successful so far, as a pilot? [5 - 10 minutes]
- • To you, what makes a program successful?

- How confident are you that ALUS will continue to exist for 10 years? 20 years?
- For those of you who are very confident – how does your impression of the future of ALUS affect your decision to participate?
- For those of you who are not very confident – how does your impression of the future of ALUS affect your decision to participate?

3 - Farm Goals and ALUS Goals Question for Focus Group Meetings

During the focus groups, the moderator said to the participants and non-participants: "At the bottom of the papers in front of you, there is a list of farm goals. I'd like you to check off all that apply to you."

The list of these goals, largely informed by Pannell et al (2006), included:
- wealth and financial security
- environmental protection and improvement
- to be a well respected member of the community and social approval
- personal integrity and high ethical standards
- balance of work and lifestyle
- to survive and grow
- to farm well and be recognized for this
- to improve the physical state and appearance of the farm
- to earn enough profit to be able to improve and develop the farm
- to have good quality animals and crops

Appendix D

1 - Interview Strategy

This document describes the interview strategy for my thesis research, 'The Provision of Environmental Goods and Services in Norfolk County: A Community Capacity Analysis [working title]'. Here, I identify and explain the types of interviews that I intend to use, establish the number of interviews I plan on conducting, briefly comment on some ethical and pragmatic components of the interviews, and detail the expected results as categories of information to be collected in the interview process.

Interview Type: Semi-Structured Interviews

My general interviewing method falls between the two extremes of structured and unstructured interviewing technique; hence, semi-structured interviewing. Since this leaves some ambiguity in the approach, I will outline the technique that I will implement in my interviews. Hesse-Biber and Leavy (2006) characterize semi-structured interviews as "rely[ing] on a certain set of questions, and guiding the conversation to remain, more loosely, on those questions… [while] allowing respondents some latitude and freedom to talk about what is of interest or important to them." I will not ask all participants the exact same set of questions; nor do I expect the answers to fall into a limited set of response categories two features which typically characterize structured interviewing (Fontana and Frey, 2005). Instead, the questions for each interview will be drawn mostly from an interview guide tailored specifically to each group of interview participants, as outlined in Table 1. There will likely be the addition of several questions specifically tailored to each interview participant, depending on their historical and current involvement with the ALUS project. Should I feel the need to deviate or improvise, change the order, or skip a question during the interview, I will act upon these inclinations.

Table 1: Identification of Groups and Individuals as Interview Participants

Groups to interview	Individuals to interview
ALUS organizers	• Bob Bailey - VP policy, Delta Waterfowl • Dave Reid – Norfolk Land Stewardship Council Coordinator • Bryan Gilvesy – Chair of the ALUS Partnership Advisory Committee • Kristen Thompson - ALUS coordinator • Shawn Hill - PEI Department of Environment, Energy, and Forestry, and PEI ALUS organizer

General Farm Organizations	• CFFO
	  o John Clement, General Manager
	• NFU
	  o Richardson
	• OFA
	  o Dave A.

Norfolk County Residents	• Rural, farm landholders
	  o ALUS adopters
	    ▪ Early adopters
	    ▪ Later adopters

	o Non-adopters
	• Rural, non-farm landholders
	• Urban residents
EG&S researchers	• ALUS researchers
	o Wanda Gorsuch, Manitoba ALUS researcher
	• EG&S researchers
	o Tristan Knight, case study comparison for EG&S programs in Canada and the US
Other organizations (government and NGOs) with environmental interests	• Government
	o OMAFRA
	o AAFC
	• NGOs
	o Ontario Nature
	▪ Anne Belle and/or Amber Cowie
	o Local Foods Plus
	▪ Mike Schreiner
	o Environment Probe
	▪ Elizabeth Brubaker
	o Canadian Cattlemen Association/OCA
	o DFO
	o Other Ag. Commodity Groups

Semi-structured interviewing is appropriate for my purpose, as I endeavour to both understand and explain perceptions of the ALUS approach at differing degrees of involvement with the ALUS pilot project. Semi-structured interviewing can allow for the achievement of both goals. One aspect that makes my interviewing method unique is the fact that there will often be two interviewers, interviewing one participant. The other interviewer will be Paul Guerra, another researcher working on a similar topic with a largely overlapping pool of interview participants as myself. The reasoning for having an interviewing team is that it allows for a smoother and more fluid interviewing process; while one researcher is writing, the other can maintain eye contact and display visual cues of listening. The issues of validity, and potential discomforts that may arise from having two interviewers present will be explored.

I will use both closed-ended questions and open-ended questions in the interviews. Closed ended questions can be answered by either 'yes/no' responses, or response categories on a Likert scale. Likert (1932) is given credit with the development of the Likert scale, which he devised as a method to measure social attitudes; he characterizes these question types as: "an endeavour to equalize the step-intervals from one attitude to the next in the attitude scale… [they] have been shown to yield a satisfactory reliability, and in terms of correlations… a satisfactory validity." There are many statistical assumptions made in the utilization of the Likert scale. Clason and Dormody (1994) note about Likert scaling that "[it] presumes the existence of an underlying (or latent or natural) continuous variable whose value characterizes the respondents' attitudes and opinions." Other assumptions and possible sources of error introduced by this question format will be examined more deeply in the data analysis section of my thesis. I will also use open-ended questions in my interviews; this question type is used when the interviewer seeks to understand an issue with more depth (Fontana and Frey, 2005). Open-ended

questions give the participant room to take control, establish the context and to reflect upon information that they deem important, rather than to be lead be the question.

Each question type yields differing advantages: closed-ended questions have an ease of coding, and allow for greater comparability amongst participants. Open-ended questions allow for a deeper explanation of a theme and can more accurately reflect the concerns of the participants (Geer, 1991). Both questions-types, however, are associated with potential measurement errors and threats to validity and truthfulness, issues which will be explored in my final thesis.

For the majority of my interviews, I intend on having one participant per meeting. For a small portion of my interviews, I will use a type of interview called 'Focus Groups', which are described below.

Focus Groups

I intend to use focus group interviews as one type of interview for the 'Norfolk County Residents' group of participants.[13] Focus group have been a staple method in marketing research, and in the last decade have started to gain popularity as a research method in social sciences (Liamputtong and Ezzy, 2005). Khan and Manderson (1992) describe a focus group as a "qualitative methods with the primary aim of describing and understanding perceptions, interpretations, and beliefs of a select population to gain understanding of a particular issues from the perspective of the group's participants." Liamputtong and Ezzy (2006) note that focus groups usually contain between 6 – 10 people, and brings together a group of people who might have similar experiences and/or concerns. The reason that I would like to host focus group interviews is that it provides the opportunity for information to be obtained out of the group dynamic. It will enable me to focus on the participants' knowledge and experiences, without directly asking them questions to investigate such information, as these can arise out of group discussion. Social learning can occur throughout focus group interviews, as a result of discussion and interactions amongst a group of peers who may have had similar encounters (or lack thereof) with the ALUS pilot project in Norfolk County. Ideally, I would like to host at least two focus group interviews: one with ALUS pilot project participants, and one with non-adopters. I am also considering on having an additional focus group interview with a mix of ALUS adopters and non-adopters, depending on the success of the first focus group interviews.

Pragmatic and Ethical Factors

Interviews should last between one – two hours each. I will use a recording device when it is deemed significant to the transcribing of the interviews. I will secure oral consent from the participant before using the recording device. Participants will be given the option of skipping/passing on any of the questions that they do not wish to answer. Should they have any concerns about anonymity or confidentiality, I will inform them that I am open to discussing these issues both prior-to, or after the interview. I aspire to achieve Fontana and Frey's (2005) portrayal of the interview method as "active interactions between two or more people leading to negotiated, contextually based results." I will attempt to use 'interested listening', which, as described by Fontana and Frey (2005) rewards participation but does not evaluate the responses from the participants. As well, I will attempt to harness the skills that they deem necessary by interviewers: flexibility, objectivity, empathy and good listening. In the interpretation of my data,

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[13] I also intend on having several interviews with only participant present for this group.

I will examine errors that can be introduced through interviewing, and assess the validity of the data that I will collect.

Number of Interviews

        I intend to interview each participant at least once. With some participants, such as the ALUS organizers for example, I will have an iterative interviewing process, whereupon only small portions of the interview guide will be covered at each meeting. The rationale for this approach is that I consider these participants to be key informants. Tremblay (1957) describes a key-informant interview as a participant that is "interviewed extensively over an extensive period of time for the purpose of providing a relatively complete ethnographical description of the social and cultural patterns of their group… with the aim of securing the total patterning of a culture." Each interview will attempt to retrieve more in-depth information, and will require more time to complete. Table 2 summarizes the number of interviews that I expect to conduct within each group of interview participants.

Table 2: Number of Interviews Expected within Each Group of Interview Participants

Groups to interview	Number of Interviews Expected
ALUS organizers	• 15 - 20
General Farm Organizations	• 3 - 4
Norfolk County Residents	• One-to-one: 15 - 20 • Focus Groups: 2 - 3
EG&S researchers	• 2 - 3
Other organizations (government and NGOs) with environmental interests	• 5 - 10

Post-Data Analysis Plan: Categories of Data and Expected Results

        While I cannot predict what information I will receive, since I do not want to predetermine my research, I can comment about the categories of information that I will be collecting. The questions in the interview guides are organized by theme. These themes are guiding the overall research strategy; ultimately, I hope to be able to connect these themes to those critical success factors in the ALUS approach that foster community capacity. I will focus on the identification of these critical success factors, and how are connected together operationally. The overarching themes that I have identified in the interview guides include: Trust; Personal landholder goals and ALUS goals; Information/knowledge about ALUS; Social capital; Demographic and farm-type questions; Confidence; Reputation; Critical Success Factors I have identified additional themes in my literature review, which may be further explored, depending on the interview participant. These include: Adoption and Extension; Stewardship and conservation; Adult-learning principles; Community Development; Community-Based Social Marketing and Branding.

        From these interviews, I hope to gain an understanding of the processes in the development of the identified themes in the Norfolk County community. Once I have collected data on the operation of these themes, the next step in my research could be the creation and completion of a community-level questionnaire. There is the potential to combine efforts with the ALUS benchmark survey that is to be completed toward the end of the pilot project. A detailed survey-guide is to follow upon completion of the interviews.

2 - Interview Guide

Introduction

      My goals in the creation of this interview guide were to ensure that I am keeping my interviews focused and within my research scope, as well as to improve the comparability amongst my participants. I have prepared interview questions, categorized by groups of interview participants, and organized by my research themes. It should be noted that these lists of questions are not exhaustive, questions will be added in the research process, and the order as presented in this guide won't necessarily be the exact order of my interviews.

1 – ALUS organizers

Interview participants include:

- Bob Bailey – VP Policy Delta Waterfowl; ALUS organizer
- Dave Reid – Norfolk County Land Stewardship Council Coordinator, ALUS organizer
- Bryan Gilvesy – ALUS Partnership Advisory Committee Chair; ALUS demonstration farm; Early-adopter; ALUS spokesperson
- Kristen Thompson – ALUS coordinator

      This is a group of people with whom I intend to have an iterative interviewing process, whereupon only small portions of the interview guide will be covered at each meeting. I consider these participants to be key informants. Each interview will attempt to retrieve more in-depth information, and will require more time to complete. All participants in this group are very involved with either the creation and development of the ALUS approach in Norfolk County, or the pragmatic and coordination aspects (or both in some cases). Thus, they are very familiar with the pilot project, and will be essential in gathering in-depth information about the ALUS approach.

Background questions

- Involvement with ALUS
    - When and why did you decide to get involved with ALUS?
    - Where were you when you first hear about ALUS (ex. conference, town meeting, etc)
    - What factors motivated you to take the lead in ALUS?
- Organization questions - broadly how does ALUS work?
    - What types of activities do you do for ALUS?
    - How much of your day/week does ALUS occupy?
    - Do you think that there are activities that ALUS does not currently undertake that it should?
        - Such as…?
        - Why aren't these activities done currently?
- Comparison with other ALUS projects
    - Have you been in contact with the other ALUS pilot project organizers?

- if so, at what point, at what stages in the development of this pilot project were you communicating?
- Can you tell me more about the Norfolk Environmental Stewardship Team?
- Do you think that the ALUS approach would be a viable method for delivering EG&S all across Ontario?
  - Why/why not?
  - As the sole method of providing EG&S, or simultaneously with other programs? BMPs? How much of a priority should ALUS ideally get, as the method for which EG&S are delivered in Ontario/Canada?
- In which county do you live?
- Do you consider yourself to be a rural-farmer, rural-non-farmer or an urban resident?

Adoption/Extension/Information
- In what mechanisms is the ALUS concept presented to the community?
- What components of ALUS do you think are necessary if it is to be extended? For example:
  - Name
  - Key principles
  - PAC
  - Demonstration farms in each community
  - Etc.
- How often do you (or another ALUS organizer) present the ALUS concept to groups
  - In Norfolk county
  - Outside of Norfolk county
  - What points do you consider to be the take-home messages from these presentations
- What is your perception of the stewardship ethic of farmers in Norfolk County?
  - Do you think that this stewardship is consistent whether or not they are being compensated through incentive programs like ALUS?
  - Does ALUS build on an existing stewardship ethic or does it try and alter behaviours and perceptions?
  - What is your perception of the importance of the environment/stewardship amongst rural-non-farmers and urban Norfolk County residents?
  - Is their support of the ALUS program something that is essential for the continued success of ALUS? Why/why not?
- Are there hindrances to the dissemination of the ALUS message and/or do you think believe that more people in the Norfolk community should know about ALUS than do currently?
  - What factors influence the dissemination of this information?
  - Are there means that are more powerful in reaching audiences (eg. Having a neighbour or community member approach them, having a user-friendly website, etc)
- What do you think about government policies to provide EG&S on farmlands? How do ALUS ideas differ from government policies?

Critical success factors
- How would you define success in terms of the ALUS pilot in Norfolk County?

- o What factors/characteristics are necessary before it is defined as successful?
- o At what point would you say that it has reached this level of success?
- o What specifically makes the Norfolk pilot project successful?
- What do you consider to be the factors of the ALUS approach that differentiates if from other programs delivering EG&S?
- Do you think the ALUS approach is unique (in Ontario/Canada)?
  - o Why/why not?
- Have you learned about other programs that deliver EG&S in the US, and the UK?
  - o Do you consider these programs to be successful? Why?
  - o What do you consider to be the lessons learned from these initiatives?
  - o What factors would you deem necessary for success in those programs?
  - o Would these characteristics also be important in the ALUS approach in Canada?

Confidence
- Do you perceive ALUS will continue to persist for 10 years? 20 years?
- How much influence do you feel you can have over the course of the ALUS project?

Trust
- Do you go through an explicit trust-building process with landholders in Norfolk County?
  - o What does this entail?
  - o Are there purposeful trust-building activities in which ALUS organizers partake?
- Do you think it is important that ALUS organizers are able to go onto participating landholder's farms at all times?
  - o … Whether or not they are present?
  - o Do farmers show resistance to allowing ALUS organizers and guests onto farms?
  - o Can you explain the process of choosing the farms that would be shown on the farm tour?
  - o Were these farmers immediately trusting of showing strangers around their farm, or was there some negotiation involved?
  - o What types of issues were raised in these conversations?
- As an ALUS organizer, what elements contribute to the development of trust with landholders in Norfolk County?
  - o Ex. repeated interactions, meeting expectations, delivering on promises. etc
- In this community, what do people see as the attributes of a trustworthy person…
  - o … of a neighbour?
  - o … of a stewardship coordinator?
  - o … of an ALUS coordinator?
- What characteristics are necessary in the ALUS coordinator in terms of establishing trust with Norfolk County farmers?
- How often do you interact with landholders in the community about subjects not directly related to ALUS?
  - o In what types of circumstances are these interactions?
- Trust of government EG&S funding and delivering agencies…
  - o What types of past experiences have you had with them?
  - o Have you generally had positive or negative experiences?
  - o Have your personal experiences changed the level of trust you've bestowed in government workers over time?

Social capital
- Do you consider ALUS to be a social network/personal network for farmers in Norfolk? Why/why not?
- Have you recruited publically visible people to support ALUS?
    - What types of individuals/groups endorse ALUS?
    - What do you think this endorsement does for participation rates?
    - What about this endorsement encourages farmers to participate and/or support ALUS?
- Do you believe that ALUS is a supportive organization?
- How often do you communicate with people from surrounding counties?
    - For what types of reasons would you communicate with them? (ie. To do business, friendships, part of the same group, etc)

Branding/Marketing/Community-Based Social Marketing
- How important is the 'ALUS' title in this approach to the provision of EG&S?
- How necessary is its title if the program is expanded to a provincial and/or national level?
- Who do you believe is responsible for funding the ALUS approach?

Personal landholder goals and ALUS goals
- What do you consider to be amongst goals of landholders in Norfolk County? (OR list them in order of priorities?)
    - material wealth and financial security
    - environmental protection and enhancement (beyond that related to personal financial gain)
    - social approval and acceptance
    - personal integrity and high ethical standards
    - balance of work and lifestyle
    - to survive and grow
    - to set and overcome challenges
    - to farm well and be recognized for this
    - to improve the physical state and appearance of the farm
    - to earn enough profit to be able to improve and develop the farm
    - to have good quality animals and crops
    - to be a respected member of the community
    (adopted from Pannell et al 2006 and Makeham and Malcom 1993)
- Do you consider the goals of ALUS to be consistent with the personal goals of farmers in Norfolk?
    - OR: List ALUS goals – ask them whether or not they match up to the goals that were listed above. Ask to discuss the connection between the two.

2 – General Farm Organization leaders
Interview participants include:
- CFFO (Christian Farmer's Federation of Ontario)
    - John Clement
- NFU (National Farmer's Union)
    - Richardson

- OFA (Ontario Farmer's Association)
  - Dave A.
- Canadian Cattlemen's Association/ OCA (Ontario Cattlemen's Association)

As a general strategy, before interviewing any individual from this group, I would research their organization's mission statement and key principles, to familiarize myself with their goals. I would also read any press releases/statement about ALUS so that I am more familiar with their organization's position about the ALUS concept. Each interview guide will be tailored specifically to the individual being interviewed, but questions will largely drawn/inspired from those listed in this section.

Background Questions
- What organization do you belong to/what is your position within this organization?
- Is your organization involved with ALUS in any way?
  - How are you involved? Eg. Part of the ALUS alliance, promotes ALUS in your own meetings, communities, etc.
  - How did you organization learn about ALUS?
  - What was the process in which your organization became involved? (ex – was it a group decision to be involved)
  - What types of activities do you do as a part of your involvement with ALUS?

Adoption/Extension/Information
- What do you think about government policies to provide EG&S on farmlands?
  - How do ideas about providing EG&S from your organization differ from government policies?
- What do you feel is the motivation of advice/suggestions from government agents?
  - Are they considerate of the goals relating to the environment of your organization?
- Have you heard about ALUS? If yes:
  - How did you first hear about ALUS?
  - From what source did you obtain information about ALUS?
    - In what way did this source influence your decision?
  - About how many people did you consult for information?
  - What type of people did you consult for information about the ALUS project?
  - Do you trust the information that came from these various people?
- What is your perception of your member's opinions of ALUS?
- Can you tell me about the learning process amongst your members that know about ALUS?
- Have you attended meetings and/or information sessions about ALUS?
  - If yes: What meetings/information sessions about ALUS have you attended?
  - Where did you hear about these meetings?
  - What motivated you to attend this meeting?
- Do you feel that there is all the information that you require about ALUS readily available?
- Do you perceive there to be an easability to disseminate information in farm communities?

- What do you believe to be the best mechanism for disseminating information about a program such as ALUS?
- Rate your knowledge about ALUS:
    o 1 – Strongly informed
    o 2 – Informed
    o 3 – Little knowledge
    o 4 – No knowledge
    o 5 – No opinion

Stewardship/Perceptions of the environment
- Do you think environmental improvement works best in a farmer-to-farmer manner? Please elaborate…
- What is it about the farmer-to-farmer connection that you believe aids in environmental improvement?
    o Would other common interests suffice and/or is a mutual interest in environmental enhancement not sufficient?
- What is your perception of the stewardship ethic of farmers in Norfolk County?
    - Do you think that this stewardship is consistent whether or not they are being compensated through incentive programs like ALUS?
    - Does ALUS build on an existing stewardship ethic or does it try and alter behaviours and perceptions?
    - What is your perception of the importance of the environment/stewardship amongst rural-non-farmers and urban Norfolk County residents?
    - Is their support of the ALUS program something that is essential for the continued success of ALUS? Why/why not?
- Concern for environment/stewardship?
    o Do you believe that, amongst your members, environmental management practices to maintain the physical landscape including riparian areas, wetlands, natural upland areas, and wildlife habitat are currently in place?
    o What is you perception of the adoption of these practices?

Trust
- Do you think that there is mistrust in government funding and delivering agencies amongst farmers in Norfolk County? Ontario in general?
    o Why do you think there is mistrust?
- Was there scepticism in their acceptance of ALUS? Can you tell me more about this?
- Do you believe that your members are you more likely to participate in a program that is organized in their community, compared to a program that is organized at the provincial level? National level?
    o Why?
    o Do you think that this participation would change if this program that is organized at the community level were funded by the provincial and/or national government? Why?

Social capital
- Do you consider yourself to be a 'member' of ALUS?
- What do you do/get by being a member?

- Do you know any organizations of public figures who have publically endorsed ALUS?
  o Did their endorsement
    ▪ change your perception about ALUS?
    ▪ change your decision?
- Do you believe that ALUS is a supportive organization? If yes – how so?
- Do you think the 'farmer-to-farmer' delivery of ALUS is an important factor of their approach?
  o Why/why not?
  o Do you think that this program would be successful if it were delivered by someone outside of the community?
  o What qualities does someone from the community have that would make them particularly qualified in delivering the ALUS approach?

Personal landholder goals and ALUS goals
- [List the goals of ALUS; see Appendix A.1]: Do you consider the goals of ALUS to be consistent with the personal goals of farmers in Norfolk?
  o In what ways are they connected to what you perceive to be personal goals of the farmers in your organization?
  o In what ways do you think that personal goals of farmers can be made known to ALUS in a way that they can consider them in their program implementation?

Confidence and Reputation
- What are your perceptions about success of ALUS?
- Do you perceive ALUS will continue to persist for 10 years? 20 years?
- How does your impression of the future of ALUS affect your decision to endorse ALUS?
- How much influence do you feel you can have over the ALUS project?
- What do you perceive ALUS' reputation to be amongst the members of your organization?
- Did the number of farmers uptaking ALUS in Norfolk County influence your decision to endorse? How so?
- Is reputation an important signal in doing business? In friendships?

Branding/Marketing/Community-Based Social Marketing
- How important is the 'ALUS' title in this approach to the provision of EG&S?
- How necessary is its title if the program is expanded to a provincial and/or national level?
- Who do you believe is responsible for funding the ALUS approach?

- Questions for John Clement, CFFO:
- You noted that incentives coupled with positive peer pressure works well in the provision of EG&S what are some examples of things you would consider to be 'positive peer pressure'?
- "Erosion of common purpose has whittled away at the historic nature of the rural community"
  - what was the common purpose?
  - What do you think eroded this?
- "Many CFFO members see family farmers as the keepers of an integrated set of values, while other countryside users are often seen as agents of the dissolution of these values.

Most insisted that farming is fundamentally different from other types of business and that other types of rural activities encroach on a way of life."
- Can you speak to the fundamental difference?

3 – ALUS adopters and non-adopters

This group will be comprised of Norfolk County residents. There will be a mix of ALUS-adopters (including both early adopters and later adopters), and non-adopters. The questions will differ quite significantly between ALUS adopters and non-adopters; the interviews will have to be adapted as such. If possible, I would also like to interview non-farmer residents, including rural-non-farmers and urban residents. The types of interviews will be both one-on-one and focus groups.

Background/demographic questions
- What is the size of your farm? (perhaps set this up as a multiple choice scale)
- What is your type of farm?
- What is your perception of Norfolk county ecosystem? Eg: Healthy, unhealthy?
  - What is your perception of environmental/ecosystem degradation in Ontario… compared to 10 years ago; 20 years ago; 50 years ago?
  - [perhaps set this up as a likert scale]
  - 1 – much more degraded
  - 2 – somewhat more degraded
  - 3 – neither degraded nor improved
  - 4 – slightly improved
  - 5 – much more improved
  - 6 – no opinion
- Concern for environment/stewardship
  - Do you believe that environmental management practices to maintain the physical landscape including riparian areas, wetlands, natural upland areas, and wildlife habitat are currently in place?
  - What is you perception of the adoption of these practices?
- Approximately how many learning projects do you think you do every year?
  - Do you consider the ALUS projects to be a learning project?
- Do you participate in the environmental farm plan?
  - If yes: in what respects do you utilize the EFP?
- Personality trait question
  - Do you consider yourself to be an introvert or an extrovert?
- What is the income your derive from your on farm?
  - <$20 000
  - $20 000 - $50 000
  - >$50 000
- Number of people dependent on farm's income?
- Do you have any other source of income, other than your farm?
  - If yes: How many people work off-farm that contribute to the family income?
  - What proportion, approximately, of your family income is derived from the farm?
  - Gross receipts?

Adoption/Extension/Information
- Adopters
- What factors contributed to your decision to adopt ALUS?
- What was your motivation to adopt ALUS? (Perhaps list some reasons and have them prioritize…)
- When did you decide to adopt the ALUS project?
- How many acres of your land are currently under the ALUS project?
    o As a percentage of your land?
- Was your decision impacted by the length of the ALUS contract/agreement?
    o Were you willing to participate in a 9-year contract?

- Non-adopters
- Do you know about the ALUS approach?
- How did you hear about it?
- Was there a specific reason for your decision not to join?
- Was ALUS at any point under consideration for you?
- Would having many of your neighbours participating encourage you to adopt?
    o Other counties in Ontario?
    o Other provinces?

- Both adopters and non-adopters
- Do any of your neighbours participate in ALUS?
    o How close to you?
    o Was there communication about ALUS between you and your neighbour?
    If neighbours do participate AND interview participant is an ALUS adopter:
    o Did they participate before or after you?
    o How did their decision influence yours/how did your decision influence theirs?
    o Who adopted the ALUS project first?
    o How did you hear about the ALUS pilot; did you or your neighbour pass along the message to one another? Can you tell me about that process?
- Have you heard about the ALUS pilot project in Norfolk County?
- Can you tell me a few things you know about ALUS?
- Rate your knowledge about ALUS:
    o 1 – Very informed
    o 2 – Somewhat informed
    o 3 – Neither informed nor uninformed
    o 4 – Somewhat uninformed
    o 5 – Very uninformed
    o 6 – No opinion
- The following questions assume some amount of knowledge about the ALUS project:
    o Have you attended any meetings/information sessions about the ALUS approach?
        ▪ If yes: What meetings/information sessions about ALUS have you attended?
        ▪ What motivated you to attend this meeting?
    o Do you feel that there is all the information that you require about ALUS readily available?
    o From what source did you obtain information about ALUS?
        ▪ In what way did this source influence your decision?

- o About how many people did you consult for information?
- o What type of people did you consult for information about the ALUS project?
- o Do you trust the information that came from these various people?
- o Do you trust the information that you got from your neighbour more than someone working with ALUS?
- What do you believe to be the best way to get information our about a program such as ALUS?
- How large a change to your farming practises do you consider adopting the ALUS approach?
  - o 1 – minor change
  - o 2 – somewhat minor change
  - o 3 – neither minor nor major change
  - o 4 – somewhat major change
  - o 5 – major change
  - o 6 – no opinion
  - o What is an example of a more major change and a less major change?
  - o Do you consider the decision to adopt an ALUS approach to be an important decision?
- When you made the decision to adopt the ALUS mode, did you experience stress?
  - o 1 – no stress
  - o 2 – neither stressful nor stressless
  - o 3 – some stress
  - o 4 – major stress
  - o 5 – no opinion
  - o why?

Personal landholder goals and ALUS goals
- what do you consider to be amongst your goals as a farmer?
  (OR list them in order of priorities?)
  - o material wealth and financial security
  - o environmental protection and enhancement (beyond that related to personal financial gain)
  - o social approval and acceptance
  - o personal integrity and high ethical standards
  - o balance of work and lifestyle
  - o to survive and grow
  - o to set and overcome challenges
  - o to farm well and be recognized for this
  - o to improve the physical state and appearance of the farm
  - o to earn enough profit to be able to improve and develop the farm
  - o to have good quality animals and crops
  - o to be a respected member of the community
  (adopted from Pannell et al 2006 and Makeham and Malcom 1993)
- Do you consider the goals of ALUS to be consistent with your personal goals?
  - o OR: List ALUS goals – ask them whether or not they match up to the goals that were listed above. Ask to discuss the connection between the two.
- For adopters:

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- Do you plan on continuing with ALUS for the next 5 years? 10? 20?
  - What ALUS activities have you undertaken on your farm?
  - What were your ideas about what you wanted to have? Did ALUS organizers persuade you to undergo a different project? Tell me more about the collaborative aspects.
-

Critical success factors
- Adopters
- What aspects of the ALUS projects are necessary components for your continued participation?
  - Eg. Farmer-to-farmer, a competitive level of compensation, support of general farm groups that you are a member for, community support, etc.
- Did your perception of ALUS change after you adopted ALUS practises.
  - In what way?
- Early adopters vs. later adopters – what influenced your decision to adopt early?
  - Do you generally adopt of new innovations early on in their creation? (innovators vs. laggards)
  - Have you taken risks in the past with respect to new environmental approaches to farming?

- Non-adopters
- Have past experiences with on-farm environmental models influenced your decision not to participate in ALUS?

- Both adopters and non-adopters:
- Have past experiences with on-farm environmental models influenced your decision to participate in ALUS?
- Do you believe that ALUS offers a unique approach to providing environmental services
  - If yes – what factors make ALUS unique (ie. Farmer-to-farmer, community oriented, monetary incentives, disassociation with government, etc)

Trust
- Adopters
- Have you had experiences interacting with ALUS organizers? If yes: What factors enable you to trust an ALUS organizer?
  - Ex. repeated interactions, meeting expectations, delivering on promises.. etc
- How often do ALUS organizers interact with you about subjects directly related to ALUS? (per week/per month)
- How often do ALUS organizers interact with you about subjects not directly related to ALUS? (per week/per month)
  - In what types of circumstances are these interactions?
- Tell me about a situation in which you were interacting with ALUS organizers – did they treat you fairly? Did they respect your concerns?... or…
- Do you trust ALUS organizers to treat you fairly?
  - 1 – Strongly agree
  - 2 – Agree
  - 3 – Neither agree nor disagree
  - 4 – Disagree

- o 5 – Strongly disagree
- o 6 – No opinion
- o Why?
- Have you experienced a situation where you were required to confide confidential information with ALUS? If yes…
  - o Did you trust that it would be kept confidential?
  - o Were you at ease revealing this information?
- Do you trust that confidential/proprietary information shared with ALUS will be kept strictly confidential?
  - o 1 – Strongly agree
  - o 2 – Agree
  - o 3 – Neither agree nor disagree
  - o 4 – Disagree
  - o 5 – Strongly disagree
  - o 6 – No opinion
  - o Why?
- ALUS has always been even handed in its negotiations with you
  - o 1 – Strongly agree
  - o 2 – Agree
  - o 3 – Neither agree nor disagree
  - o 4 – Disagree
  - o 5 – Strongly disagree
  - o 6 – No opinion
  - o Why?
- ALUS may use opportunities that arise to profit at your expense OR would not use opportunities that arise to profit at your expense
  - o 1 – Strongly agree
  - o 2 – Agree
  - o 3 – Neither agree nor disagree
  - o 4 – Disagree
  - o 5 – Strongly disagree
  - o 6 – No opinion
  - o Why?
- Based on past experiences, you cannot, with complete confidence, rely on ALUS to keep promises made to you OR Based on past experiences, you can, with complete confidence, rely on ALUS to keep promises made to you
  - o 1 – Strongly agree
  - o 2 – Agree
  - o 3 – Neither agree nor disagree
  - o 4 – Disagree
  - o 5 – Strongly disagree
  - o 6 – No opinion
  - o Why?

(adopted from Gulati and Sytch, 2008)

- Do you feel supported in your decision making (related to ALUS activities) by being a member?

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- Non-adopters
- Have you had experiences interacting with ALUS organizers? If yes: What factors enable you to trust an ALUS organizer?
    o Ex. repeated interactions, meeting expectations, delivering on promises.. etc

- Both adopters and non-adopters:
- In this community, what do people see as the attributes of a trustworthy person…
    o … of a neighbour?
    o … of a stewardship coordinator?
    o … of an ALUS coordinator?
- Trust of government EG&S funding and delivering agencies…
    o What types of past experiences have you had with them?
    o Have you generally had positive or negative experiences?
    o Have your personal experiences changed the level of trust you've bestowed in government workers over time?
- Have your neighbour or other community member experiences changed your impression/trust over time?
- Are you more likely to participate in a program that is organized in your community compared to a program…
    o created and implemented at a provincial level?
    o created and implemented at a national level?
    o Imported from another county?
    o Why?
    o Are you more likely to participate in a program that is organized in your community if the funding is provided by the government?
- "I don't trust the agencies that are involved in the ALUS project"
    o 1 – Strongly agree
    o 2 – Agree
    o 3 – Neither agree nor disagree
    o 4 – Disagree
    o 5 – Strongly disagree
    o 6 – No opinion
    o Why?
- Do you think that most people would try to take advantage of you if they got a chance, or would you say that most people try to be fair
    o 1 – Strongly agree
    o 2 – Agree
    o 3 – Neither agree nor disagree
    o 4 – Disagree
    o 5 – Strongly disagree
    o 6 – No opinion
    o Why?
- "I am concerned that if I participate now, it will be easier for public agencies to regulate my land use in the future"
    o 1 – Strongly agree
    o 2 – Agree

- o 3 – Neither agree nor disagree
- o 4 – Disagree
- o 5 – Strongly disagree
- o 6 – No opinion
- o Why?
- Would you trust a neighbour to take care of…
  - o your children
  - o your land
  - o … when you are away?
- Would you trust someone you had never met, but you know is a Norfolk county resident, to babysit after your children?
- Would you lend farming tools to a neighbour?
  - o … to a neighbour when they have borrowed in the past and not returned them?
  - o To a community member that you don't know very well?
- Tell me about a situation in which you were interacting with government officials about land-use changes – did they treat you fairly? Did they respect your concerns? ... or…
- Do you trust government officials to treat you fairly?
  - o 1 – Strongly agree
  - o 2 – Agree
  - o 3 – Neither agree nor disagree
  - o 4 – Disagree
  - o 5 – Strongly disagree
  - o 6 – No opinion
  - o Why?
- How much do you agree with the following statements:
  - o "Most people in Norfolk county are trustworthy"
    - ▪ 1 – Strongly agree
    - ▪ 2 – Agree
    - ▪ 3 – Neither agree nor disagree
    - ▪ 4 – Disagree
    - ▪ 5 – Strongly disagree
    - ▪ 6 – No opinion
    - ▪ Why?
  - o "Most people in Norfolk County can expect others to help them if they should need it."
    - ▪ 1 – Strongly agree
    - ▪ 2 – Agree
    - ▪ 3 – Neither agree nor disagree
    - ▪ 4 – Disagree
    - ▪ 5 – Strongly disagree
    - ▪ 6 – No opinion
    - ▪ Why?
- On a scale of 1 (very little) – 5 (very much), how much can you trust:
  - o Neighbours
    - ▪ 1 – Strong trust
    - ▪ 2 – Trust

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- 3 – Neither trust nor mistrust
- 4 – Mistrust
- 5 – Strongly mistrust
- 6 – No opinion
- Why?
  - o Family members
    - 1 – Strong trust
    - 2 – Trust
    - 3 – Neither trust nor mistrust
    - 4 – Mistrust
    - 5 – Strongly mistrust
    - 6 – No opinion
    - Why?
  - o Community organizers
    - 1 – Strong trust
    - 2 – Trust
    - 3 – Neither trust nor mistrust
    - 4 – Mistrust
    - 5 – Strongly mistrust
    - 6 – No opinion
    - Why?
  - o Government employees
    - 1 – Strong trust
    - 2 – Trust
    - 3 – Neither trust nor mistrust
    - 4 – Mistrust
    - 5 – Strongly mistrust
    - 6 – No opinion
    - Why?
  - o Strangers that reside in Norfolk County
    - 1 – Strongly agree
    - 2 – Agree
    - 3 – Neither agree nor disagree
    - 4 – Disagree
    - 5 – Strongly disagree
    - 6 – No opinion
    - Why?
- What do you think about government policies to provide EG&S on farmlands?
  - o How do ideas about providing EG&S from your organization differ from government policies?
- What do you feel is the motivation of advice/suggestions from government agents?
- Was there a period of time before you trusted ALUS as an organization?
  - o How long?
  - o What types of factors served as signals that they are trustworthy…

Social Capital
- Do you know any organizations of public figures who have publically endorsed ALUS? If yes: who?
  - o Did their endorsement:
    - Change your perception about ALUS?
    - Change your decision to adopt?
- Is your farm run by a single operator? If not – who runs it/how many people/family or hired?
  - o In what way was the decision to adopt ALUS a social process or a collective decision?
  - o Were there many discussions had before the decision to adopt ALUS? Were there any negotiations/ was everyone supportive of the decision made?
- Do you consider yourself to be a 'member' of ALUS?
  - o What do you do/get by being a member?
  - o Do you feel safer in your decision-making and support network by being a member?
  - o Do you consider ALUS to be a social network/personal network for farmers in Norfolk? Why/why not?
  - o Do you believe that ALUS is a supportive organization? Why/why not?
- Whom do you consider to be in your personal support network? (ex. family members, neighbours….)
- What do you consider to be a part of your community?
  - o Norfolk county, group of neighbours, small part of town?
- How much do you value communication on a weekly basis with:
  - o On a scale of: [note to self: change wording]
  - o 1 – very highly valued
  - o 2 – valued
  - o 3 – neutral
  - o 4 – not valued
  - o 5 – very not valued
  - o 6 – no opinion
  - o Family members
  - o Neighbours
  - o Organizers
  - o Strangers
- What groups do you belong to? (check off all that apply)
  - o General farm groups
    - CFFO
    - NFU
    - OFA
    - Other: _____
  - o Commodity groups:
    - OCA/Canadian Cattlemens Association
    - DFO
    - Poultry
    - pork

- wheat marketing board
- milk marketing board
- Other:
- Recreational
  - Hunting affiliated clubs: _____
  - Fishing groups: _____
  - Nature group
  - Sporting groups/team
  - Snowmobiling
  - Golf clubs
  - Athletic club
  - Other:
- Other hobby/interest groups
  - Land owners association
  - Environmental groups
  - Rotary club/kinsmen club/community groups
  - Food-related club: (ie. Local foods plus, etc)
  - Lion's club
  - Book club
  - Clubs based on national affiliations (ie. Belgian club)
  -
- Religious associations
  - Church
  - Knights of Columbus
  - Other:
- Other: _____
- How often (number of times/week) do you:
  - Speak with your neighbours
  - Spend more than one hour in town
  - Attend town hall meetings (per month)[town-hall style meeting – how better to communicate this?]
- How often do you communicate with people from surrounding counties?
  - For what types of reasons would you communicate with them? (ie. To do business, friendships, part of the same group, etc)

Confidence
- If participant has at least some knowledge about ALUS:
  - What are your perceptions about the future success of ALUS?
    - Do you think it could be a provincially implemented policy?
      - National?
      - Why/why not?
  - Do you perceive ALUS will continue to persist in Norfolk County for 10 years? 20 years?
  - How does your impression of the future of ALUS affect your decision to participate?
  - How much influence do you feel you can have over the ALUS project?

Reputation
- Are you more or less comfortable having an ALUS associate come onto your farm than a government official?
- In what way did the number of people participating in Norfolk County influence your decisions to participate or not to participate?
- In what way did the pilot projects in Manitoba, PEI influence your decisions?
    - Have you heard about them?
    - Do you know about the outcomes in those places?
    - Do you think there are similarities/differences between them?
- Do you consider what affect your actions will have on your reputation in the community?
    - Does your level of trust in community members differ according to their reputations?
- Is reputation an important signal in doing business? In friendships?

4 – EG&S researchers
Interview participants include:
- Wanda Gorsuch (Manitoba ALUS project)
- Tristan Knight (EG&S case study thesis, including ALUS)
- Monika Drozdz (EG&S case study thesis, club goods and emerging markets in EG&S)

One component of interviewing these researchers is to gather some advice/lessons learned from their research about similar topics. Depending on whether or not I choose to have a comprehensive case-study comparison component of my thesis, the interviews may focus on the lessons-learned aspects. I will also ask them their critical opinion of the ALUS project, informed by their informed knowledge of current affairs in EG&S in Canada. These interviews will likely lean much more heavily on unstructured interviewing, and take the form of guided-conversation.

Lessons from research
- Can you briefly describe your research?
    - Did you discuss ALUS in your research?
    - On what aspects did you write about ALUS?
- Can you briefly summarize your findings?
- Do you have any recommendations in the research process? Lessons learned?
- After having briefly explained my research:
    - Are there any similarities in our topics of research?
    - Do you have any specific suggestions for my methods and methodology?
    - Is there anyone who you would suggest that I speak with re: my research?
- Did you touch upon the issues of trust and social capital at all in your research?
    - If yes – how do? Would you characterize these as critical factors in the success of a given approach to delivering EG&S on farmlands?

Knowledge/Perceptions about ALUS
- Do you know about ALUS?
    - How did you find about?
    - Did you attend any information meetings?

- o Do you believe that ALUS has a unique approach in to delivering EG&S on farmlands? Why/why not?
- o What do you think about ALUS and branding?
  - ▪ Does this appear to be an important factor in their work?
- o Can you briefly compare the Norfolk pilot project with the EG&S project(s) that you studied – are there similarities/differences?

Critical success factors
- Do you believe that it is important for urban and rural-non-farmers to support ALUS?
  - o Why/why not?
  - o Is this critical to future successes of ALUS? Why/why not?
- Do you think government is seriously considering uptake of ALUS?
  - o If yes: Why ALUS?
  - o If no: What do you think is hindering government uptake of ALUS?
- Do you believe ALUS to be a successful project… in Ontario? In Manitoba? PEI?
  - o Why/why not?
  - o Do you perceive ALUS will continue to persist for 10 years? 20 years?
- Do you think that the ALUS approach would be a viable method for delivering EG&S all across Ontario? Canada? Why/why not?

5 – Other organizations with environmental interests
Interview participants include:
- Ontario Nature
  - o Anne Belle and/or Amber Cowie
- Environment probe
  - o Elizabeth Brubaker
- Local Foods Plus
  - o Mike Schreiner
- Norfolk Woodlot Owners Association
  - o Steve Scheers (Norfolk's superintendent of forestry and cemeteries)
- OCA/DFO/other ag commodity groups
- Government officials
  - o OMAFRA
  - o AAFC

As a general strategy, before interviewing any individual from this group, I would research their organization's mission statement and key principles, to familiarize myself with their goals. I would also read any press releases/statement about ALUS so that I am more familiar with their organization's position about the ALUS concept. Each interview guide will be tailored specifically to the individual being interviewed, but questions will largely drawn/inspired from those listed in this section. This questions for these groups are similar to those in section two: general farm organizations. They differ, however, in certain respects. For example, many of these groups have been publically avid supporters of ALUS, sitting on their steering committees, while on the other hand, others have publically written quite negatively about the approach. Generally, these groups have much more specific and tailored interests,

many of which overlap and/or clash with the ALUS principles. These harmonies and tensions will be elaborated upon.

Background Questions
- What organization do you belong to/what is your position within this organization?
- Is your organization involved with ALUS in any way?
  - How are you involved? Eg. Part of the ALUS alliance, promotes ALUS in your own meetings, communities, etc.
  - How did you organization learn about ALUS?
  - What was the process in which your organization became involved? (ex – was it a group decision to be involved)
  - What types of activities do you do as a part of your involvement with ALUS?
- What is the demographic distribution of your members?
  - ie – farmers, rural-non-farmers, urban? Where are your members from?

Adoption/Extension/Information
- Interviewer lists principles of ALUS (see Appendix A.1):
  - Do you see these principles as supporting or contrasting the principles/mission statement of your organization?
    - Why?
- What do you think about government policies to provide EG&S on farmlands?
  - How do ideas about providing EG&S from your organization differ from government policies?
- What do you feel is the motivation of advice/suggestions from government agents?
  - Are they considerate of the goals relating to the environment of your organization?
- Have you heard about ALUS? If yes:
  - How did you first hear about ALUS?
  - From what source did you obtain information about ALUS?
    - In what way did this source influence your decision?
  - About how many people did you consult for information?
  - What type of people did you consult for information about the ALUS project?
  - Do you trust the information that came from these various people?
  - What is your perception of your member's opinions of ALUS?
  - Can you tell me about the learning process amongst your members that know about ALUS?
  - Have you attended meetings and/or information sessions about ALUS?
    - If yes: What meetings/information sessions about ALUS have you attended?
    - Where did you hear about these meetings?
    - What motivated you to attend this meeting?
- Do you feel that there is all the information that you require about ALUS readily available?
- Do you perceive there to be an easability to disseminate information in farm communities?
- What do you believe to be the best mechanism for disseminating information about a program such as ALUS?

- Rate your knowledge about ALUS
  - 1 – Strongly informed
  - 2 – Informed
  - 3 – Little knowledge
  - 4 – No knowledge
  - 5 – No opinion
- Rate your perception of your members' knowledge about ALUS:
  - 1 – Strongly informed
  - 2 – Informed
  - 3 – Little knowledge
  - 4 – No knowledge
  - 5 – No opinion
- Do you believe that it is important for urban and rural-non-farmers to support ALUS?
  - Why/why not?
  - Is this critical to future successes of ALUS? Why/why not?

Trust
- Do you think that there is mistrust in government funding and delivering agencies amongst farmers in Norfolk County? Ontario in general?
  - Why do you think there is mistrust?
- Was there scepticism in their acceptance of ALUS? Can you tell me more about this?
- Do you believe that your members are you more likely to participate in a program that is organized in their community, compared to a program that is organized at the provincial level? National level?
  - Why?
  - Do you think that this participation would change if this program that is organized at the community level were funded by the provincial and/or national government? Why?

Stewardship/Perceptions of the environment
- Do you think environmental improvement works best in a farmer-to-farmer manner? Please elaborate…
  - What is it about the farmer-to-farmer connection that you believe aids in environmental improvement?
  - Would other common interests suffice and/or is a mutual interest in environmental enhancement not sufficient?
- What is your perception of the stewardship ethic of farmers in Norfolk County?
  - Do you think that this stewardship is consistent whether or not they are being compensated through incentive programs like ALUS?
  - Does ALUS build on an existing stewardship ethic or does it try and alter behaviours and perceptions?
  - What is your perception of the importance of the environment/stewardship amongst rural-non-farmers and urban Norfolk County residents?
  - Is their support of the ALUS program something that is essential for the continued success of ALUS? Why/why not?
- Concern for environment/stewardship?
  - Do you believe that, amongst your members, environmental management

practices to maintain the physical landscape including riparian areas, wetlands, natural upland areas, and wildlife habitat are currently in place?
  o   What is you perception of the adoption of these practices?

Social capital
- Do you consider yourself to be a 'member' of ALUS?
- What do you do as a member? What do you get by being a member?
- Do you know any organizations of public figures who have publically endorsed ALUS?
  o   Did their endorsement
    - change your perception about ALUS?
    - change your decision?
- Do you believe that ALUS is a supportive organization? If yes – how so?
- Do you think the 'farmer-to-farmer' delivery of ALUS is an important factor of their approach?
  o   Why/why not?
  o   Do you think that this program would be successful if it were delivered by someone outside of the community?
  o   What qualities does someone from the community have that would make them particularly qualified in delivering the ALUS approach?

Confidence and Reputation
- What are your perceptions about success of ALUS?
- Do you perceive ALUS will continue to persist for 10 years? 20 years?
- How does your impression of the future of ALUS affect your decision to endorse ALUS?
- How much influence do you feel you can have over the ALUS project?
- What do you perceive ALUS' reputation to be amongst the members of your organization?
- Did the number of farmers uptaking ALUS in Norfolk County influence your decision to endorse? How so?
- Is reputation an important signal in doing business? In friendships?

Branding/Marketing/Community-Based Social Marketing
- How important is the 'ALUS' title in this approach to the provision of EG&S?
- How necessary is its title if the program is expanded to a provincial and/or national level?
- Who do you believe is responsible for funding the ALUS approach?

Appendix to Interview Guide

1. ALUS principles summarized

1. Farmers should receive annual payments or other forms of compensation to deliver and maintain environmental services.
2. Stewardship and conservation are services, therefore they must be assigned a fair market value.
3. ALUS will consider payments for the maintenance of existing natural assets, particularly where a viable alternative exists for converting natural assets into other (agricultural) uses. ALUS will also provide incentives for landscape improvement.

4. ALUS will produce measurable environmental goods and services, and associated socio-economic benefits for all Canadians.
5. Investment in the capacity of citizens and rural communities is integral to conservation.
6. Farmers and ranchers are in the best position to deliver environmental goods and services on their land.
7. ALUS will be independently monitored and audited by trusted farm organizations and existing institutions that have the capabilities required to perform this role.
8. ALUS development and delivery will be transparent and accountable, from the conceptual stages to service delivery.
9. ALUS will meet Canada's international trade obligations, and shall remain consistent with ecological goods and services delivery programs undertaken by our trading partners.
10. ALUS will complement the policies of the Agricultural Policy Framework, the emerging Environmental Policy Framework, and with provincial policies influencing natural capital and environmental resource conservation.

ALUS is an environmental goods and services delivery program that uses a "fee-for service" concept to provide environmental benefits to all Canadians

3 – Interview Log

Interview Log

Name	Date	Affiliation	Location
John Clement	27-May-2009	Christian Farmers Federation of Ontario	CFFO Offices, Guelph
Tristan Knight	14-Jan-2009	EG&S Researcher, from York University	Second Cup, Toronto
Kristen Thompson	4-Jun-2009	ALUS Coordinator	Norfolk County Building, Simcoe
Dave Reid	4-Jun-2009	ALUS Organizer/Norfolk County	OMAFRA Research Station, Simcoe
Dave Reid	10-Sep-2009	ALUS Organizer/Norfolk County	OMAFRA Research Station, Simcoe
Bryan Gilvesy	10-Sep-2009	ALUS Organizer/Norfolk Famer	OMAFRA Research Station, Simcoe
Bryan Gilvesy	16-Sep-2009	ALUS Organizer/Norfolk Famer	YU Ranch
Steve Scheers	16-Sep-2009	ALUS Organizer/Norfolk County	Norfolk County Building, Simcoe
Kristen Thompson	16-Sep-2009	ALUS Coordinator	Norfolk County Building, Simcoe
Dennis O'Grady	19-Oct-2009	South Nation Conservation Authority	Brewed Awakening, Merrickville
Paul Smith	30-Oct-2009	Ontario Ministry of Agriculture Food and Rural Affairs	1 Stone Rd W. (OMAFRA Building), Guelph
Wanda Gorsuch	5-Nov-2009	EG&S Researcher, from Royal Roads University, Saskatchewan	Metro Vancouver Building, Surrey, BC
Dave Reid	27-Jan-2010	ALUS Organizer/Ministry of Natural Resources	OMAFRA Research Station, Simcoe
Bryan Gilvesy	27-Jan-2010	ALUS Organizer/Norfolk Famer	Boston Pizza, Simcoe
Tracey Ryan	10-Feb-2010	Grand River Conservation Authority	GRCA Complex, Cambridge
Anne Loeffler	10-Feb-2010	Grand River Conservation Authority	GRCA Complex, Cambridge
Andrew Graham	1-Mar-2010	Ontario Soil and Crop Improvement Association	1 Stone Rd W. (OMAFRA Building), Guelph

PAC meetings Attended

PAC Meeting	26-Jan-2009	ALUS Partnership Advisory Committee	OMAFRA Research Station, Simcoe
PAC Meeting	26-Feb-2009	ALUS Partnership Advisory Committee	OMAFRA Research Station, Simcoe
PAC Meeting	14-May-2009	ALUS Partnership Advisory Committee	OMAFRA Research Station, Simcoe
PAC Meeting	29-Jun-2009	ALUS Partnership Advisory Committee	OMAFRA Research Station, Simcoe
PAC Meeting	29-Jul-2009	ALUS Partnership Advisory Committee	OMAFRA Research Station, Simcoe
PAC Meeting	25-Nov-2009	ALUS Partnership Advisory Committee	LPRCA Boardroom, Simcoe
PAC Meeting	27-Jan-2010	ALUS Partnership Advisory Committee	OMAFRA Research Station, Simcoe
PAC Meeting	7-Apr-2010	ALUS Partnership Advisory Committee	OMAFRA Research Station, Simcoe

Focus Groups

ALUS Participant Group	8-Dec-2009	Norfolk County Farmers	OMAFRA Research Station, Simcoe
ALUS Non-Participant Group	10-Dec-2009	Norfolk County Farmers	OMAFRA Research Station, Simcoe

Workshops, Conferences and Meetings

ALUS Alliance Meeting	27-Mar-2009	ALUS alliance	1 Stone Rd. W. (OMAFRA Building), Guelph
CAES Conference	29-may-2009 and 30-may-2009	Canadian Agricultural Economics Society	University of Toronto, Toronto
Workshop on the Incentive Mechanisms for EG&S delivery	04-Aug-2009 and 05-Aug-2009	University Researchers and Practitioners in EG&S from across Ontario	University of Toronto, Toronto
ALUS Farm Tour	10-Sep-2009	ALUS	Various Farms, Norfolk County, Ontario
Meeting about EG&S program implementation in the Lower Mainland, BC	5-Nov-2009	Metro Vancouver	Metro Vancouver Building, Surrey, BC
A.D. Latornell Conservation Symposium (Poster Presentation)	18-Nov-2009 until 20-Nov 2009	A.D. Latornell Symosium	Nottawasaga Inn, Allison, Ontario
Environmental Sciences Syposium (Poster Presentation)	16-Jan-2010	University of Guelph	University of Guelph, Guelph
ALUS Farmer Workshop	9-Feb-2010	ALUS	Delhi, Ontario
ALUS Workshop about Carbon, Cap and Trade, and Ecocredits	March, 2010	ALUS	1 Stone Rd. W. (OMAFRA Buidling), Guelph

Appendix E

1 - Partnership Advisory Committee's Terms of Reference

Alternative Land Use Services (ALUS)
Norfolk County Pilot Project
Partnership Advisory Committee (PAC) Terms of Reference
January 17/06 (Approved March 9, 2006)

Purpose:
The ALUS Partnership Advisory Committee (PAC) will oversee the management and administration of the ALUS pilot project in the county.

Partnership Advisory Committee (PAC) Structure:
The PAC will be a standing committee of the Norfolk Federation of Agriculture (NFA), the lead partner for the ALUS pilot. The president of the NFA will sit on the PAC *ex officio*. As ALUS is a farmer-driven project, the majority of voting members should be farmers, with the remainder of the PAC to be made up of partners contributing significant resources. In addition to the NFA president and vice-president, the following partners are anticipated as members of the PAC – Norfolk Land Stewardship Council, Delta Waterfowl Foundation, Norfolk Soil & Crop Improvement Association, Norfolk County, a federal government representative, a provincial government representative and the chair of the technical advisory committee (TAC). From time to time, representatives of interested groups will be invited to attend meetings as non-voting guests and provide input.

PAC Chair:
PAC members shall elect a chairman from amongst their number whose duties will include:

1. presides at meetings, maintains order and keeps the meeting moving;

2. works closely with the project coordinator to prepare the agenda and adheres to it by accepting only discussion on the topic from the floor;

3. starts and adjourns meetings on time;

4. knows the rules of meeting procedure (including parliamentary procedure);

5. is aware of the priority of business items and schedules them appropriately.

6.   voting when decisions are to be decided by a vote, and having a second vote in event of a tie, to break the tie.

Decision Making:

Decisions of the PAC will be reached by consensus as much as possible, where consensus is

defined as: close enough to agreement that there is no formal objection. If necessary, formal

votes will be called and the majority shall rule. Each member casts one vote, with the exception

for the chair noted above. A quorum shall consist of a majority of the PAC.

Minutes:

Draft minutes will be circulated to all PAC members soon after each meeting. Other members of the community expressing interest and support in ALUS may receive draft minutes circulated upon request to the chairman.

Administration:

Volunteer members of the PAC, who are not agency employees assigned to participate, will be paid a per diem rate of $100 for meetings, and reimbursed their personal expenses incurred while attending regular meetings and other events associated with the ALUS project - eg. personal vehicle use @ $0.38/km., long distance phone charges, meals, registration fees, stationary, and postage.

Conflict of Interest:

Conflict of interest is defined as an opportunity by committee members to receive personal gain over and above the benefits by other project participants because of prior knowledge or time advantage. Where committee members are party to exclusive information which may be perceived as a personal advantage, the committee member must declare the potential conflict and act to ensure no personal gain occurs both in the eyes of the government and the eyes of the local community. No person who has a conflict of interest shall use the knowledge or material which creates the conflict in a way that would create any personal gain that is not available to other actual or potential participants. All conflicts of interest must be declared up front and all committee meetings will include the opportunity to do so at the beginning of meeting agendas.

Committees:

The PAC may strike committees as appropriate. Such committees must be chaired by a PAC member but may include members of the community who are generally supportive of the ALUS concept. Proposed actions by committees must be approved by consensus or by a quorum of the PAC prior to implementation.

TAC Structure:

The PAC will assemble a Technical Advisory Committee which will represent participating partner organizations. The TAC will provide timely advice to the PAC on the technical aspects of project implementation, review technical information and assist in planning and delivering

technical aspects of the project. One important role of the TAC will be to insure that existing ecological capital is not compromised by implementation of any ALUS project. The TAC may include representation from such organizations as the Norfolk Land Stewardship Council, Long Point Region Conservation Authority, Ontario Ministry of Natural Resources, Ontario Ministry of Agriculture and Food, Ontario Federation of Anglers and Hunters, Norfolk Field Naturalists, Norfolk County and other local, provincial or federal agencies to be determined by the PAC.

2 - ALUS Evaluation and Recommendations

The way that this evaluation was compiled was I went through my thesis, drawing on ideas from sections which spoke of the ALUS program. I categorized these evaluations into four sections: 1) What ALUS does well, 2) What ALUS realized partway through their program and altered in their programming, 3) Potential improvements to the ALUS model, and 4) General advice. I emphasized the evluation around the critical success factors as they were established in Chapter 8.

1. What ALUS Does Well

The role of the broker

- ALUS acts as a broker, between the farmers on the one hand and multiple funding sources, including: the government; organizations that wish to green their image; and potentially individuals who wish to contribute to environmental programming in Ontario.
- By maintaining this position as a broker, ALUS has the potential to improve informational quality to parties on both sides, which can decrease transaction costs in PEGS programs.

Reduce transaction costs

- By occupying this intermediary position, PEGS program practitioners can increase the incidence of trust and social capital in exchanges, and in doing so, decreasing one or more of search, negotiation, or concluding costs.
- Reduction of search costs:
    - farmer liaisons can significantly reduce the search costs simply with their knowledge of the people in their community, reducing the costs of searching for, and obtaining new participants.
- Reduction of negotiation costs:
    - the use of farmer liaisons also reduces the barriers in communication with the farmers in the community, when the people that approach them are their friends and neighbours
    - The idea that farmers "speak the same language," and give off the impression of credibility to other farmers can also reduce the costs of negotiating the transaction
- Reduction of concluding costs:
    - Many farmers were comfortable and familiar with the Agricorp organization, which does the auditing for ALUS. The threat of strange organizations coming onto farmer's land was quelled with the use of a trusted farm organization, with a good reputation in the farming community.

  o Demonstration farms have a positive social pressure for maintaining EG&S lands according to ALUS standards.

Build trust between organizers and participants

- Perception of a positive reputation of program held in the community. Reputation building started before ALUS existed in its pilot stage, because organizers were known in the community. Also, trustworthy reputations were developed throughout the ALUS process.
  - o All participants considered ALUS organizers and coordinator to be trustworthy, described as knowledgeable, experts, addressing concerns, knowing the land and understanding the farmer's role within it.
- Trust (according to some, eg. Tyler 2001, Staub, 1978) is more easily developed between people with familiar backgrounds and whom we believe to be similar to ourselves. ALUS is good at developing those empathic relations
- Moreover, as I discussed in Chapter 3, building on social capital and trust in exchanges can support the continued development of these informal institutions and networks.
- Built trust by working with farmers, not dictating to them.
- While only half of the non-participants considered ALUS representatives to be trustworthy, all agreed that trust would be absolutely necessary for them to participate in the ALUS program.

Utilize community capacity

- ALUS calls on community capacity in many ways.
  - o County's administrative assets to help with the banking and data management of the pilot
  - o Hiring local farmers to help with the planting
  - o Hiring farmer liaisons to be the first-contact for program marketing

Recognizing, and building on, the notion that farmers are good stewards of the land

- Farmers tended to like the recognition that they were environmental stewards of the land, and ALUS was a program to "help them do the right thing."
- This speaks to the belief that some farmers are inherently good environmental stewards of the land, as a moral duty.

Farmer to farmer approach, word-of –mouth marketing, and farm gate signs

- Community, or social capital-type, pressures were considered in encouraging participants to look into signing onto ALUS.
- Other ways that farmers suggested this could be done include:
  - o Encouragement from a neighbour
  - o Norfolk Land Stewardship Council supporting ALUS
  - o Norfolk Federation of Agriculture as a partner
  - o A son, daughter or another family member encouraging the farmer
- Another effective marketing tool was learning about ALUS from various neighbour's signs up on their farm gate promoting the pilot project.
- It was stated that participating in a program like ALUS can have positive reputation effects within the community, in that they are participate in a worthy cause and respectable program. A sign on their gate brings this to light.

Communication with participants
- Ease of communication with ALUS organizers was a factor that influenced participation decisions
- Communication with ALUS organizers was described as "good", "easy", etc.
- Communication was described by both participating and non-participating farmers as:
    - competence and knowledge of EG&S
    - accessibility of the PEGS program organizers

Reducing fear amongst participants
- ALUS was perceived as an agent that took fear out of joining onto agricultural-environmental programs.
- ALUS has the potential to alter the way that farmers perceive environmental programs. Instead of having a program based out of regulation and fear, ALUS has the ability to have their program be concerned with the promotion of environmental goods and rewarding the landowner.

Promoting simplicity of program implementation
- Considered an easy and simple program.
- The funding is streamlined
- Projects can be completed quickly
- Assistance and back-up available for questions or concerns
- They considered ALUS to be user-friendly

Encouraging taking ownership of projects on the farm
- ALUS participants seemed to embrace ALUS' goals, and pursue them as if they were their own on their farms.
- Farmers take ownership of the EG&S projects that they implement on their farms, because of their heavy involvement throughout the ALUS process.
- ALUS as giving farmers a chance to do the projects that they wanted to do, but were not previously affordable options, By aligning ALUS projects with existing personal farm goals, ALUS does not try and take away from a farm operation. Instead, their programs target the stewardship activities that a farmer would have the motivation to upkeep and enhance.
- The ALUS organizers seemed to be very conscious of not "tricking" landowners into doing anything on their land. Ideally, the landowners desire the land conversions in the first place, and ALUS comes in to act as an enabling mechanisms.

Participatory processes
- ALUS operates according to a participatory process ethic, in that the program is built in association with the farmers in the community. Two examples that demonstrate how ALUS encompasses participatory approaches include:
    - Their Partnership Advisory Committee: farmers from the community, technical experts and policy experts.
    - The 9-step project implementation process.
    - Farmer-led, Farmer-driven

- Participatory processes enhance farmers' decision-making abilities (with the additional information that they have from being part of the planning process) and the implications of those decisions (because the decisions they make affect themselves and their neighbours.)
- Helps to foster creative solutions amongst their participants, and that it will work for them on a practical level.

Building confidence and confidentiality assurances among participation
- ALUS firmly supports the maintenance of confidentiality of its participants.
- Trust is strongly associated with confidentiality.

Using social capital to promote program participation
- ALUS uses community members to assist with program implementation. This can give the program an instant credibility by other members of the community.
- Capitalizing on existing social networks can minimize challenges, while extending the reach that a program can have over the community.

Offering one-on-one assistance
- ALUS organizers acted as both technical specialists and delivery agents in their EG&S programming. They made use of Conservation Authorities, NGOs, and their own knowledge as sources of technical information.
- They gave farmers access to trained specialists who come out to the farm, and provide one-on-one assistance. Guidance and re-assurance as part of the maintenance of the EG&S projects

Managing participants' expectations
- Giving guidance, and helping farmers to understand what they need to do.
- Examples of the way in which ALUS manages participants' expectations include:
    - o Twilight tours, which is a tour of demonstration farms with farmers in the community, focused on participants. This enables social networking and social learning amongst their participants, and to ensure they are addressing expectations management when it comes to growing EG&S on the farm.
    - o Having demonstration farms: good advertisement, success stories, and help communicate how to manage EG&S.

2. What ALUS realized partway through their program and altered in their programming

Having flexible payments, when EG&S have multiple functions on the farm
- ALUS adopted to suit farmers needs, when EG&S projects were also being used for other purposes.
    - o Eg. Feeding Tall Grass Prairie to cattle, after allowing the grass to sit fallow for a certain period of time. Only half the payment is given in this situation.

Difficulties with landlord-tenant relations
- A component of communications with participants
- ALUS realized the communications issues that could arise with having a landlord participate, but having the tenant work the land.

- They specifically addressed this issue in their programming by making it mandatory that a landlord sign up for the ALUS program, and encouraging communication between landlords and tenants.

Solving capacity constraint issues
- Made use of community capacity (as identified in section 1)
- One issue that ALUS had experienced with capacity in their development was with the first coordinator: the original ALUS coordinator had not been scheduled as a full-time ALUS employee.
- Hiring Kristen Thompson full time in 2008 was a major step forward for ALUS' capacity.

Safe harbour clause and liability concerns
- Were aware of concerns about liability amongst their participants, for example, about facing increased regulatory liability by protecting ecologically sensitive areas, and creating wildlife habitat on their farm.
- Discussions of the potential for a safe harbour clause were brought up at PAC meetings in 2007 – 2010.
- One way that ALUS can quell liability concerns would be to encourage the development of a safe harbour clause. This suggestion could also be considered in the third section, as a step to be taken in the future.
- Another way would be to clearly articulate the difference between ALUS and peer-reviewed Environmental Farm Plan in terms of liabilities, and promote ALUS as a middle-ground between peer-reviewed Environmental Farm Plan and undertaking no provision of EG&S on farmlands. As I've observed in my thesis the difference between the two programs is the identification and minimization of environmental risks (Environmental Farm Plan) vs. the provision of ecological goods (ALUS). In ALUS, the organizers can, and do, re-assure farmers that information which could impact them negatively is not going to come back to penalize them.
- It is in this way that ALUS can appeal to a niche group of farmers, those who do not want to lose control over information that could put them at risk to additional legislation, but still want to participate in a program that allows them to provide EG&S, with assistance and funding.

3. Potential improvements to the ALUS model
Clarify purposes of program, and have the program design and communications follow those purposes
- In Chapter 8.4.4 I have identified that ALUS has two broad goals: efficiency goals and equity goals.
- These two objectives have different implications on program design. This conflict is demonstrated through the different ways in which success is measured, in meeting each of these goals.
- Being successful in reaching the efficiency goal requires achieving the highest level of environmental additionally possible given the circumstances. Achieving this goal, however,

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does not imply anything about the equity with which EG&S funds are distributed throughout the community.

- Conversely, being concerned with the equitable distribution of funds across the community may not result in the most efficient delivery of EG&S.
- As I've suggested, being aware of the tension with having these two goals, and pursuing both simultaneously is something that the ALUS program should consider.

Reconsider the amount and type of payment mechanism
- It is possible that $150/acre/year is not the ideal payment amount. It is possible that ALUS could pay farmers less, and still have the same acreage enrolled, or more.
- Payments were thought of as an incentive to consider participation in ALUS, but was not one of the critical success factors. Participants liked that participating had 'no financial cost', but didn't report that making a profit off of participation was necessary for their commitment.

Communicating to non-participants
- As Table 6.3 demonstrated, there were a lot of misconceptions of the ALUS program that non-participants perceived to be true.
- When promoting ALUS, organizers could address these perceptions directly, to clarify any myths that might be perpetuating in the minds of potential participants.
- These perceptions that ALUS non-participants had included: Added liability with participation in ALUS, Fear of Added Government Interference, ALUS vs. Government, Worries of Poor Communication, and No New and Additional Projects
- Communication and accessibility of organizers to potential participants is especially important, as it gives them an indication of what communication would be like if they were to participate in ALUS.

Reducing fear among non-participants esp. about liability issues
- Although ALUS recognized certain sources of fear and liability issues, it remained to be an issue especially for potential participants.
- Generally, ALUS should clearly explain what implications there are with respect to liabilities in terms of participation, as well as well as the ways in which they plan to address liability issues that could come up via participation.

Emphasizing ALUS' distinction from government programs
- As mentioned above, this one of the perceptions that some non-participants held was a confusion about whether ALUS was itself a government program. Together with a tendency to distrust government programs, this does a disservice to ALUS programming.
- I would suggest that having a clearly communicatable position about the separate realms of work that ALUS and the government do, and clarify where they stand with respect to government funding and connections to government programs, so that potential participants are aware.

Concerns about the future of the program
- While it is important to build confidence in the program, it is also important to openly communicate about program's future, and what it would mean for participation.

- Non-participants were especially concerned about the future of the ALUS pilot, and the insecurity of participation.
- Addressing this issue can build confidence amongst participants in the ALUS program.
- ALUS could quell concerns about program longevity by:
    - Informing potential participants that different projects had different implications for permanency on the farm. Some projects are easier to convert back, should the program come to an end.
    - The word 'pilot' may suggest 'short term'. Consider the evolution into a 'program'.

Consider targeting specific farm types for participation
- Some farmers believed that ALUS fit certain types of farms (cattle farms, greenhouses, cash crops) better than others (orchards, Christmas trees).
- ALUS could consider reviewing the types of farms that they have currently enrolled in their program, and consider targeting their market to these types of farms.
- Or, alternatively, ALUS could ensure in its marketing that they specify that they have projects for any type of farm, as well as ensure that their principles and communications are meaningful and applicable to all farm types.

4 - General Advice
Dealing with misinformation
- One way that this misinformation could be addressed is by creating a 'Frequently Asked Questions' list that could be distributed to ALUS workshop participants (as conceived by Bryan Gilvesy)
- Another way that this could be addressed is with an expansion of the ALUS principles. From these focus groups, it seemed that fear of added liability, and trust/confidence were two major factors that could either encourage or discourage participation (depending on the sign and strength of this variable). Should this be a desirable pursuit for ALUS organizers, I would recommend two additional principles, which could look something like the following:

1- ALUS will keep personal information confidential. (We are not a government-run organization, and your personal information is safe with us.)
2- You will not experience increased liabilities by signing up with ALUS. (You will not be put at risk of additional people coming onto your land, and you will not need to purchase additional insurance when you sign up for ALUS.)

Stakeholder Analysis
- Consider using some kind of stakeholder analysis to make sure that everyone who needs to be included, is, in fact, included

Guidelines
- However flexible ALUS decides that the guidelines are (in terms of relaxing the two working guidelines), remember that they are a means of communication of the program's objectives. They must, in my opinion, remain consistent with the message of the program's objectives that are communicated across all audiences.