Fostering the Provisioning of Ecosystem Services by Private Landowners

by

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ABSTRACT

FOSTERING THE PROVISIONING OF ECOSYSTEM SERVICES BY PRIVATE LANDOWNERS

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The past decade has witnessed a burgeoning interest within scholarly and applied circles in the re-casting of environmental amenities as commodities for trade, marketable in much the same way as a loaf of bread or a quart of strawberries. With the ostensibly growing foothold of the 'ecosystem services' (ES) paradigm, the public good nature of environmental stewardship has been thrust into the limelight. The newly-emergent perspective holds thus: given that individual landowners are expected to bear the responsibility of meeting heightened standards of environmental protection through additional expenditures or foregone development opportunities, and yet society at large reaps the benefits, they should be remunerated by society.

This thesis explores the governance arrangements that would serve to foster the provisioning of ES by private landowners. A heuristic framework is first developed, offering a means of systematically contemplating critical issues influencing the viability and performance of ES governance alternatives. Set in eastern Ontario, the empirical portion of the research assesses the interests of landowners, and program and policy professionals, for different ES governance mechanisms. In brief, interests were varied, with an openness to a range of arrangements. Notably, preferences tended toward arrangements exhibiting cooperative and collaborative leanings, and away from those with competitive underpinnings.

These understandings inform the elaboration of a set of high-order design features envisioned as preconditions in a governance 'architecture' supportive of the provisioning of ES. The findings suggest that a more open embrace of hybridity in institutional arrangements may offer a way forward as ES governance alternatives continue to be conceived. They also point to the need for a re-imagining and re-constituting of relationships such that they truly embrace the principles of mutual regard, reciprocity, and trust; such 'relations of regard' may serve to realize a renewed social contract between those working the land, and those looking on from beyond the farm (or woodlot) gate. Consistent with this suggestion, the findings

underscore the need for a greater sensibility to the diverse motivations that inspire the provisioning of ES. In contemplating prospects for reflexive governance approaches to enhance the provisioning of ES, the findings suggest reason for cautious optimism.

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CHAPTER ONE

INTRODUCTION

1.1 Research Context

The protection and enhancement of environmental amenities and qualities on private land under agriculture and forestry has long been fraught with difficulty. On such 'working landscapes,' questions surrounding responsibilities unto the land, the sanctity of private property (dating back to the philosophical musings of John Locke in the seventeenth century), and balancing utilitarian and environmental protection goals have proved among the thorniest. In a fundamental reconceptualization of society-nature relations (e.g., see Liverman 2004), the past decade has witnessed a burgeoning interest within both scholarly and applied realms in the re-casting of environmental amenities and qualities as commodities or 'services' for trade, marketable and saleable in much the same way as a loaf of bread or a quart of strawberries. The Millennium Ecosystem Assessment, commissioned by the United Nations, represented a landmark in bringing global attention to the linkage between ecosystem services (ES) and human well-being (Millennium Ecosystem Assessment, 2005).

With the ostensibly growing foothold of the ecosystem services paradigm, the public good nature of environmental stewardship has been thrust into the limelight, marking a significant shift in policy circles (Dobbs and Pretty 2004; Pierce 1996). The newly-emergent perspective under the public good lens holds thus: given that individual landowners or 'stewards' are expected to bear the responsibility of meeting heightened standards of environmental protection through additional expenditures or foregone development opportunities, and yet society at large reaps the environmental benefits, these landowners should be remunerated by society (e.g., Nathan and Kelkar 2001). Considerable impetus behind the notion of remunerating for ecosystem services has come from a landowner community frustrated by intensifying societal demands to provide what is largely a public good, oftentimes at significant private expense. This frustration is evident, for instance, in the policy position adopted by the Canadian Association of Forest Owners (CAFO, 2012):

> *"Unfortunately, the penalty, and burden of regulation, falls upon private owners who continue to maintain their land as forest, and in doing so provide a range of public benefits."*

A 2010 commentary by the Christian Farmers Federation of Ontario (CFFO) echoes the same argument, embracing ecosystem services payments as a means of moving beyond "random acts of stewardship" (CFFO, 2010). These, and like commentaries, have revealed a growing consensus among private landowners that all members of society ought to be playing a more central and *equitable* role in supporting the provisioning of ecosystem services. Gutman (2007), a notable advocate of remuneration for ecosystem services provisioning, has argued for its institutionalization through a new social contract between rural and urban actors. Yet, by what mechanism(s) might this be achieved, and how might such responsibilities be shared? To what degree will society be willing to contribute or support? Under a 'public good' framing that has come to define the ES paradigm, this latter issue forms the crux of tensions emerging between those working the land and those looking on from beyond the farm (or woodlot) gate.

While nevertheless alluring in its metaphorical simplicity, the ES paradigm and associated notions of valuation, monetisation, commodification and remuneration have raised some provocative issues on philosophical and ideological grounds among scholars working in the field of rural environmental governance and equally among conservation practitioners. The notion of assigning a monetary value to nature and its 'services,' as was famously done by Robert Costanza and colleagues (1997) in *Nature*, is ethically objectionable for many (e.g., Sagoff 2002); indeed, in direct response to Costanza et al. (1997), Norgaard and Bode (1998) ponder, somewhat facetiously, "Next, the value of God?" In a like vein, Monbiot (2014) wryly suggests that, with a price for love and a true value for society, we could produce a single figure for the meaning of life. He casts a scathing light on the neoliberal doctrine under which the 'Natural Capital Agenda' has emerged, resolute in the view that it is "effectively pushing the natural world even further into the [capitalist] system that is eating it alive (p.4)."

Other scholars have focussed their attention on a more grey area surrounding 'duty of care' issues. How does one discern between a duty of care and an act for which one ought to be remunerated? If environmental stewardship can be shown to be grounded in ethical terms with strong underpinnings couched in the language (and exercised in the practice) of responsibility, can one justify remunerating or compensating landowners? Is 'good' stewardship an ethical imperative? Or is the ideal solution one that strikes a balance between the two extremes, as suggested by Worrell and Appleby (2000, p. 274):

> *"On the one hand, stewardship might suggest that provision of some types of public benefit is a requirement of good stewardship and should not lead to demands for compensation. On the other hand it seems reasonable that society should be willing to contribute something in return for its greater stake in management."*

The concept of remunerating landowners for their provisioning of ecological services has likewise elicited anxieties about the dangers of motivational crowding (see Reeson and Tisdell 2008; Frey and Oberholzer-Gee 1997), introducing extrinsic incentives where individuals are already making intrinsically-motivated contributions. Moreover, what are the implications of such a shift in practice for the endurance of change in stewardship behaviours under an ES paradigm? In the crassest of terms, if the money dries up, do landowners remain committed to ecological enhancements?

Others have embraced the ES paradigm, arguing that ecosystems are implicitly assigned a value of zero if not considered in light of their economic worth – and are hence overlooked in policy decisions (e.g., see Armsworth et al. 2007; Heal 2000; Bingham et al. 1995). In this way ecosystem services valuation is contextualized as an opportunity to assess trade-offs in a meaningful way, facilitating environmental decision making and policy development and evaluation. The promise of ecosystem services analyses for Daily et al. (2009) lies in their making explicit to the populace the costs and benefits of alternative courses of action. Others plead a similar case for the ES paradigm, highlighting the importance of being able to translate non-market values of the environment into financial incentives for the local actors who provide desired goods and services. Engel et al. (2008), for instance, note that payments for ecosystem services (PES) schemes may offer not only the opportunity to advance *environmental* objectives, but also broader human welfare objectives such as poverty reduction, regional development and livelihood diversification. This is a refrain consistent with Potter and Burney (2002), who frame a 'multifunctional agriculture' as one in which the production of food goes hand in glove with protecting ecosystem services, sustaining rural landscapes, generating employment, and contributing more broadly to the viability of rural areas. Wunder et al. (2008) are quick to caution, however, that a tipping of the scales too far in reaching for these latter objectives may in fact undermine the primary objective of ecosystem services provision, suggesting that the US Conservation Reserve Program, as a case in point, has fallen victim to politically-determined shifts favouring farmer-income support objectives over efficiency in actual ES delivery.

In spite of the many unresolved issues, programs for remunerating landowners for the provisioning of ecosystem services are proliferating around the globe. In Costa Rica, a nation-wide framework of payment for ecosystem services is supported by the state, in large part through revenues derived from a fossil fuel sales tax (Pagiola 2008). In Australia, 'conservation tenders' are used to encourage and reward the provisioning of ecosystem services by landowners through programs like EcoTender and Bush Tender (see Eigenraam et. al 2007; Stoneham et al. 2003).

Throughout the world, there are many other examples of programs that reward landowners for the provisioning of ecosystem services. In Canada, meanwhile, ecosystem services approaches and programs have been slower to develop (as reflected in the paucity of scholarly articles on ecosystem services-related research specific to the Canadian context). A widely-referenced Canadian example of rewarding farmers for the provisioning of ecosystem services is the Alternative Land Use Services (ALUS) approach (e.g., Baxter 2011; Canadian Institute for Environmental Law and Policy 2010; CFFO 2010). While still in its early days, emerging assessments point to the potential value of the ALUS approach to enhance the flow of ecosystem services to society and to better reward farmers for the critical role they play as environmental stewards (e.g., MacKenzie 2008; Tyrchniewicz and Tyrchniewicz 2007). This backdrop of rapidly developing approaches around the globe has prompted growing interest within the policy and conservation practitioner community to probe more deeply the mechanisms by which the provisioning of ecosystem services by private landowners might be recognized and fostered.

1.2 Research Aim and Objectives

As evidenced in the preceding pages, there is a substantive knowledge gap – in both scholarly and applied schools – with respect to questions of how we might go about recognizing and fostering the provisioning of ecosystem services by private landowners.

The overarching aim of this research is to explore and assess the viability of a range of governance approaches in recognizing and fostering the provisioning of ecosystem services by private landowners.

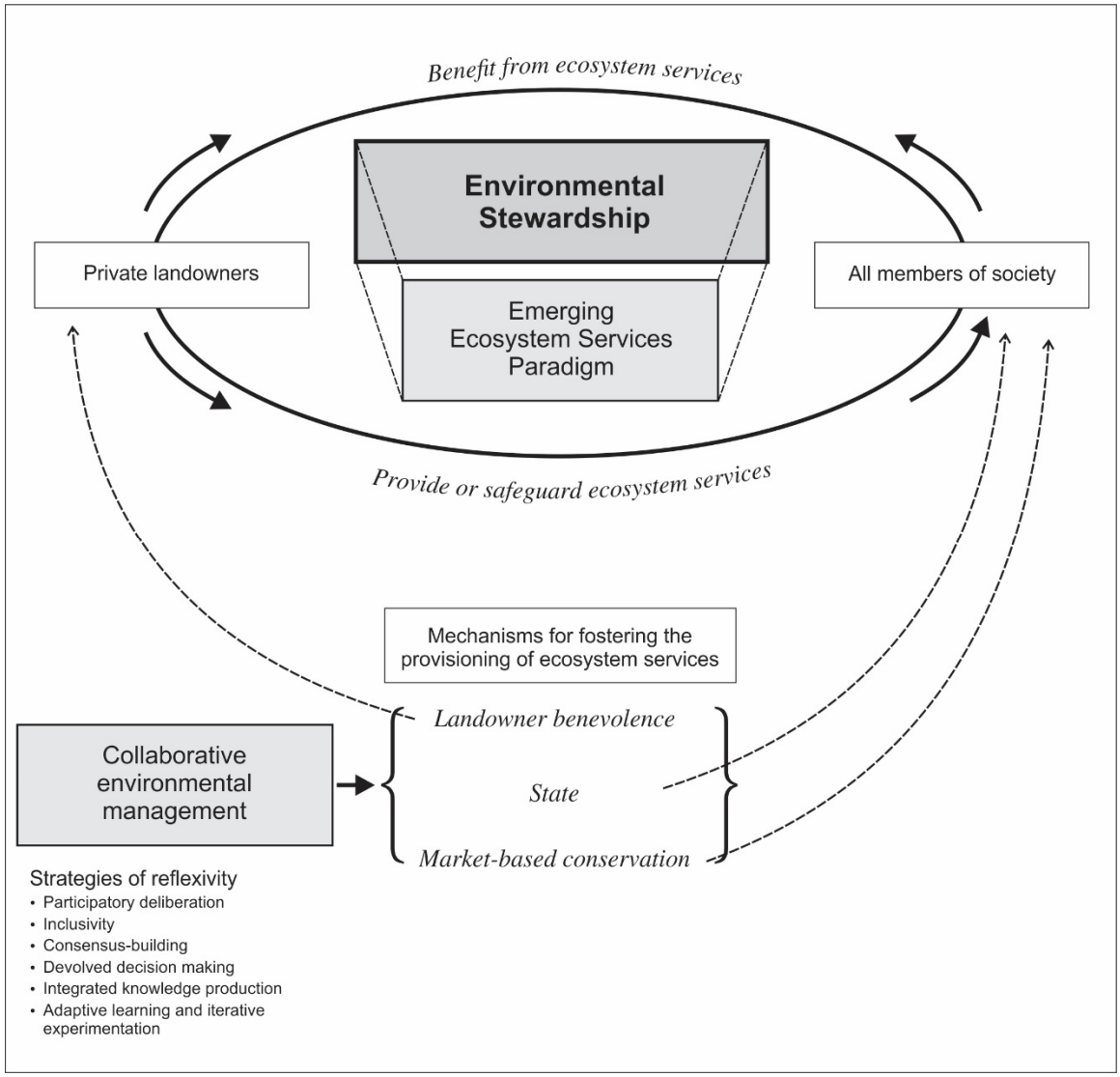
Consistent with this aim, three research objectives are pursued:

1. To paint the diversity and richness of emerging ecosystem services governance approaches through a systematic examination of key characteristics that aid in differentiating them in terms of their likely viability or performance.

2. To assess the interests of private landowners, and program and policy professionals, for a range of ecosystem services governance mechanisms.

3. To elaborate a set of foundational or high-order design features envisioned as important preconditions for building an effectual governance framework or ‘architecture’ for recognizing and fostering the provisioning of ecosystem services by private landowners.

Figure 1.1: Conceptual framework guiding the research



1.3 The Conceptual Framing of the Research

Figure 1.1 offers a diagrammatic depiction of the conceptual framework guiding this research, which has at its core the notion of environmental stewardship. In particular, issues of responsibility for environmental stewardship figure prominently, as do mechanisms for fostering stewardship behaviours. As such, the research draws heavily upon agri-environmental scholarship, which has predominantly been associated with behavioural and political economy traditions (Morris 2004). The emerging ecosystem services paradigm serves as a further building

block in the conceptual framework, bringing into focus calls for better recognizing environmental stewardship efforts by private landowners – a new contextualization that embraces the public good nature of environmental stewardship. This contextualization invokes a broader complement of actors in supporting environmental stewardship, from those stewarding the land to those who benefit from such actions (i.e., society broadly). The need for buy-in by and support from these multiple actors leads to a third building block in the conceptual framework: the notion of collaborative environmental management. In this vein, deliberative and participatory approaches form a pivotal interest, and, so, too, do broader strategies and approaches of reflexivity, including adaptive management principles.

1.4 Research Approach

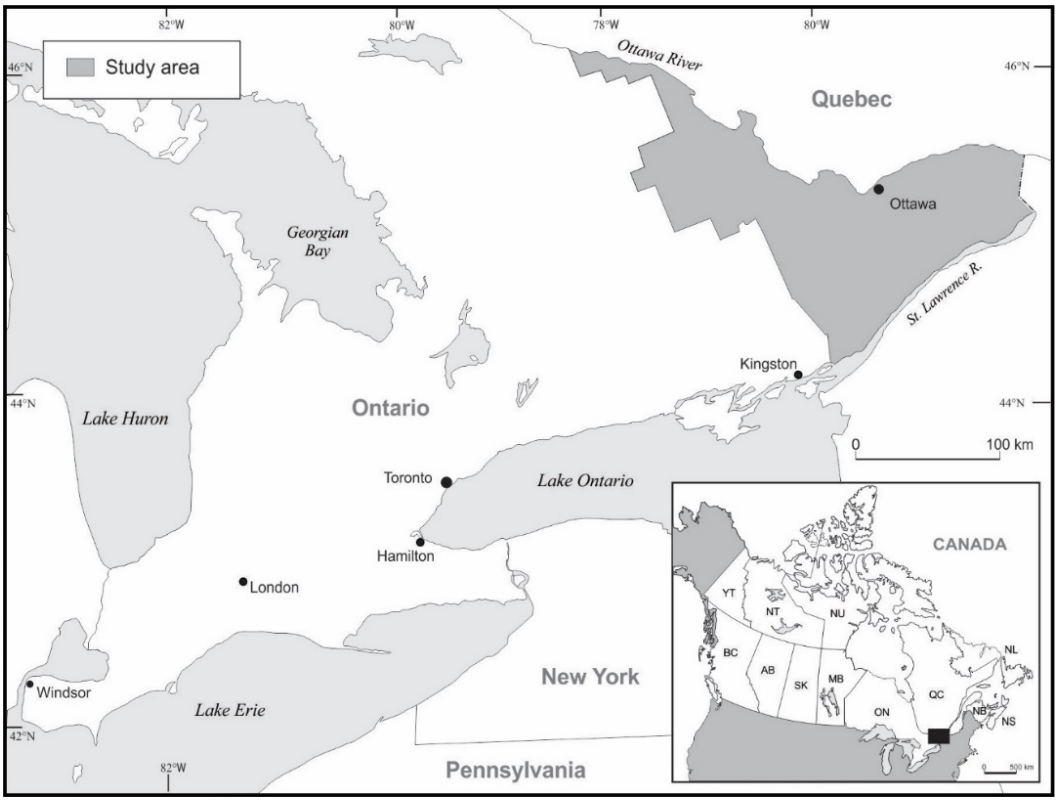
The research in this thesis is shaped (unapologetically) by my professional experience spanning two decades as a practitioner in the field of environmental conservation. It was motivated, notably, by professional interests as a staff person with the Eastern Ontario Model Forest, a not-for-profit organization that champions sustainable forestry through its work with a diverse array of partners – among those private landowners figuring centrally. In many respects, thus, the research was also enabled and facilitated by virtue of this connection (for instance, in initially reaching out to the key actor groups via my extensive professional networks to solicit participation, and in moving more expeditiously into a process of engagement with them). This 'situatedness' straddling researcher and practitioner offered a unique window pane through which to reflect introspectively and critically on the issues, philosophical, ideological, and practical. While representing an undeniable 'bias' that I bring to the research, it is argued that my close work with private landowners and a diverse range of conservation organizations and interests in eastern Ontario has enriched the effort immeasurably (engaging a richer range of perspectives than might have been possible absent this positionality).

As elaborated more fully in Section 1.5 (Structure of the Thesis), the research approach blends a high-level reconnaissance of the scholarly and applied literatures and an engagement with private landowners and program and policy professionals. Importantly, the reconnaissance exercise was vital in developing a working knowledge of the ecosystem services governance mechanisms explored with the study participants in the empirical work. The balance of this section of the thesis covers study area, the approach to engaging the key actors groups, and the approach to analyzing and organizing the data.

1.4.1 Study Area

The study area covered six of the easternmost counties in the province of Ontario including: the United Counties of Prescott and Russell; the United Counties of Stormont, Dundas and Glengarry; the United Counties of Leeds and Grenville; Lanark County; Renfrew County; and the (amalgamated) City of Ottawa (see Figure 1.2). Far from homogenous, the study area consists of a mosaic of agricultural land, upland forest, wetlands, open water, and more intensively developed areas including the Nation's Capital. Roughly 34 per cent of the landscape is forested. Major farm types include dairy, beef cattle, grain, and field crops. The study area replicates, roughly, the extents of the Eastern Ontario Model Forest (EOMF), who, alongside its many partners, had an interest in creating a dialogue around and exploring mechanisms for recognizing and fostering the provisioning of ecosystem services by private landowners (EOMF 2007). As a well-respected platform for collaborative community efforts in support of environmental conservation, the EOMF offered an ideal testing ground for the research at hand. And, with over 90 per cent of the study area under private land ownership, the perfect opportunity was afforded to engage the private landowner community.

Figure 1.2: Study area



The social dynamics of conservation in the study area, both historical and more contemporary, also made for an intriguing backdrop for the research. The late '80s and early '90s marked a period of growing friction in eastern Ontario, with government, industry, and First Nations often at loggerheads on conservation issues. It was at this time that the EOMF emerged as a forerunner in facilitating partnerships through consensus-building, playing a central role, notably, in a coming together of what was dubbed an 'unholy alliance' – provincial government (represented by the Ontario Ministry of Natural Resources), forest industry (represented by Domtar), and First Nations (represented by the Mohawk Council of Akwesasne). More recently, the 'contested' nature of conservation in eastern Ontario has manifested in a widening rift between urban and rural communities. In eastern Ontario, as elsewhere, private rural landowners have come under mounting pressure to deliver upon conservation goals that are important to all of society. An increasing reliance on regulation and enforcement to meet these goals, and the perception of an urban 'insensitivity' to the issues, pressures and realities faced by those working the rural landscape, has fueled the fire. As the birthplace of the landowner rights movement in Canada (Ontario Landowners Association, 2015), these tensions present compellingly in eastern Ontario. By way of example, the coming into force of the provincial Endangered Species Act in 2008 triggered considerable antagonism (that, arguably, has yet to subside).

Two important caveats are offered at this juncture. First, it is accepted that the research is inherently shaped by the nature of the place in question – eastern Ontario. The geographical peculiarities in terms of ecology (e.g., the relatively high percentage of forest cover and intact ecosystems compared to certain other jurisdictions) and the economics of the region (e.g., characterized by a forest and rural sector in transition) have doubtless shaped the research findings in certain ways. The same is likely true with respect to the complex socio-cultural fabric of the area (e.g., traditional land uses of the indigenous Haudenosaunee and Algonquin peoples). Second, it is acknowledged that the population in the study is not representative in statistical terms. An intensive research strategy was adopted consciously, as it was deemed most fitting given the 'community embedded' nature of the inquiry. This is not to suggest that the research findings are of relevance to eastern Ontario only, quite the contrary. They are anticipated to have far-reaching utility elsewhere, recognizing that the interpretations are sensitive to, and, in part, a product of, the geographical context. In the final analysis, it is the explanations, understandings and interpretations of *why* the various ES governance mechanisms were perceived in certain ways by the actors that lend illuminative power and robustness to the thesis – insights that should prove helpful to scholars and practitioners contemplating the development of ES governance frameworks in other parts of the world.

1.4.2 The Approach to Engaging the Key Actor Groups

Personal interaction with the study participants through focus groups and in-depth interviews formed the primary methodological foundation for the research. Focus groups were used as the principal form of interaction. The use of focus groups was deemed particularly fitting in this research context. Not only does the approach capture in-depth and nuanced information from participants (and their interactions), it also serves to generate respect and shared understanding among participants (Kellogg et al. 2007; Kitzinger 2004; Wilkinson 1998) – thus presenting opportunities for innovative, collective problem solving. Further, the direct engagement of stakeholders in such 'collaborative research performances' (cf. Bosco and Herman, 2010) builds legitimacy for program development, a desired outcome closely aligned with the research aim.

Eight focus groups were convened with private landowners (n=75) throughout the study area over the period from 2010 through 2012. The focus groups ranged in size from six to 14 participants. Participating landowners included woodlot owners, farmers, and, to a lesser extent, those with development interests. Land management interests and objectives were diverse (eclectic even), ranging from timber harvesting, aesthetic and recreational enjoyment, maple production, wildlife habitat enhancement, and food production (dairying and cropping particularly). This diversity was sought out by design (through the researcher's extensive professional network of landowner and landowner organization contacts) with the intent and hopes of engaging a broad complement of landowners with potentially wide-ranging views on the subject at hand. Two of the focus groups might be considered 'special interest' groups – one consisting of landowners representing the landowner rights movement in eastern Ontario, and another consisting exclusively of certified woodlot owners enrolled in the Forest Certification Program of the Eastern Ontario Model Forest.

In a separate but parallel dialogue, a focus group was convened with twelve local program delivery and policy professionals representing woodlot, farming and other stewardship interests. Agencies and organizations represented included: Conservation Authorities; Ducks Unlimited; the Eastern Ontario Model Forest; the Ontario Woodlot Association, the Ontario Ministry of Natural Resources (Ontario Stewardship Program); the Ontario Ministry of Agriculture, Food and Rural Affairs; the Ontario Soil and Crop Improvement Association; and, the United Counties of Leeds and Grenville. In the case of all the focus groups, an open-ended conversation about stewardship motivations, responsibilities for stewardship, and philosophical questions pertaining to ES preceded a facilitated discussion regarding an array of ES (and ES-like) recognition/remuneration mechanisms that have been instituted around the world, including those

emerging on the Canadian stage, and their appeal (desirable features and attributes) in contemplating an ES recognition framework that might be developed in an eastern Ontario context. In a departure of sorts from more conventional focus groups that typically span two to three hours in duration, each of the focus groups in this study spanned an entire day (roughly seven to eight hours). This afforded a tremendous depth of interaction with the study participants.

The research also drew on insights stemming from in-depth interviews with eight key informants possessing ES expertise spanning regional, provincial, national and international policy contexts. Perspectives from these informants were sought out in the interest of developing a deeper appreciation for the current political climate and direction for ES programming and policy in Canada, and how such might bring to bear on the design of an ES governance framework in the local context.

1.4.3 The Approach to Analyzing and Organizing the Data

The interactions with the key actor groups (as described in the previous section) were recorded and subsequently transcribed. The full range of information deriving from these interactions was analyzed, with the aim of disentangling and distilling the main storylines vis-à-vis the interests and appetites for various ecosystem services governance arrangements, including perspectives on their likely viability in the local context. (Storylines that emerged more organically in the course of conversations were treated with interest as well). Those storylines (or themes) which comprise the central narrative as it unfolds in the thesis are distinguished on the basis of being visited by most individuals, being frequently discussed at length by individuals, being discussed with particular intensity or zeal, and/or being visited across most focus groups. Elaborated more fully elsewhere in the thesis, the research approach also included a process of follow-up with study participants to seek their reaction and feedback to the author's interpretation and synthesis of key viewpoints and ideas. Serving an important validation function, this process of re-engagement created an opening for participants to challenge interpretations, to share divergent experiences, and to offer alternative or nuanced views.

1.5 Structure of the Thesis

The balance of the thesis is structured around four chapters. The first three chapters report on the execution and related findings of the research in the form of separate but interconnected

manuscripts. These manuscripts, while parcelled in a way that is fitting for publication in academic journals, build upon each other in a fundamental way and, when coupled with the introductory and concluding chapters, constitute the conceptual whole that *is* the thesis.

The first manuscript (Chapter Two) contemplates the broad question 'What are the possibilities for ecosystem services governance?' It does so by developing a heuristic framework for exploring governance alternatives – an anatomy of sorts through which the vast heterogeneity in ecosystem services recognition approaches can be distilled and contemplated in a more systematic way. A high-level reconnaissance of the scholarly and applied literatures serves as the basis for exploring, from a structural and operational perspective, the characteristics that influence the likely viability or performance of different approaches. The first manuscript attends to the first research objective, and sets the contextual stage for the two manuscripts that follow. It was developed with the audience of *Land Use Policy* in mind.

The second manuscript (Chapter Three), informed by this wider examination of critical issues and characteristics influencing the viability and performance of ecosystem services governance approaches ('the big picture'), assesses the interests of private landowners, and program and policy professionals, for a range of ecosystem services governance mechanisms. It does so through a series of focus groups and in-depth interviews in a regional setting (eastern Ontario). Opportunities are considered, as are potential hurdles to instituting them. This manuscript addresses the second research objective, and furnishes the empirical grist that shapes the third manuscript in a formative way. It was developed with the audience of the *Journal of Soil and Water Conservation* in mind.

The third and final manuscript (Chapter Four) culminates in the elaboration of a set of high-order design features envisioned as important preconditions for building an effectual governance 'architecture' for recognizing and fostering the provisioning of ecosystem services by private landowners. The architecture is informed both by the development of the heuristic framework and the empirical insights stemming from the conversations with private landowners and program and policy professionals. It fulfils the third research objective, and represents the ultimate embodiment of the conceptual whole. The architecture is contemplated through the lens of reflexive governance, with an interest in how strategies of reflexivity might serve to enhance the provisioning of ecosystem services by private landowners. The third manuscript was developed with the audience of *Agriculture and Human Values* in mind.

Lastly, Chapter Five (Conclusions) summarizes key findings and major contributions of the research effort as a whole, couching them in the context of the broader scholarship on environmental governance specifically and human geography more generally. It also offers reflections on the research process and potential openings for future research.

Table 1.1 outlines how the chapters relate to each other to form the thesis and lists their respective contributions. In adopting the manuscript approach, it bears mentioning that some overlap is to be expected. Likewise, research methods are covered more fully in the individual chapters (manuscripts) that follow.

Table 1.1: Thesis chapters and their respective contributions

Chapter	**Targeted Journal**	**Publication Status**	**Contribution**
Chapter One	n/a	n/a	• Frames the research context, and outlines research aim and objectives • Develops the conceptual framework guiding the research • Sets out the research approach • Outlines how the thesis is structured, including a summary of respective chapter contributions
Chapter Two	Land Use Policy	Unpublished	• A high-level reconnaissance of the scholarly and applied literatures serves as the basis for developing a heuristic framework for exploring ecosystem services governance alternatives • Identifies from a structural and operational perspective characteristics influencing the likely viability of different approaches
Chapter Three	Journal of Soil and Water Conservation	Unpublished	• An empirical investigation of the interests of private landowners, and program and policy professionals, for a range of ecosystem services governance mechanisms • Identifies important governance attributes of collective appeal • Highlights implications for the development and delivery of ecosystem services programs and policy
Chapter Four	Agriculture and Human Values	Unpublished	• Elaborates a set of high-order design features envisioned as important preconditions for building an effectual governance 'architecture' for fostering the provisioning of ecosystem services (drawing on the heuristic framework and the empirical investigation of interests) • In considering policy implications, conceptualizes how approaches and strategies of reflexive governance might serve to enhance the provisioning of ecosystem services by private landowners
Chapter Five	n/a	n/a	• Summarizes key findings and empirical insights for the research as a whole • Highlights scholarly and applied contributions • Offers reflections on the research process and potential openings for future research

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CHAPTER TWO

A Heuristic Framework for Exploring Governance Alternatives in the Provisioning of Ecosystem Services

2.1 Abstract

A considerable body of scholarly work has emerged under the rubric of ecosystem services in recent years, with the 'public good' nature of stewardship thrust into the limelight. In spite of the many unresolved philosophical and ideological tensions, approaches for remunerating landowners for the provisioning of ecosystem services are proliferating around the globe. The vast array of rapidly developing approaches vary considerably in form, in how they are implemented, and in the issues they grapple with or are beset by. And, interest is clearly swelling – capturing the attention of scholars and, likewise, harnessing the creative energies of practitioners in the conservation community. Yet, amidst this backdrop, there is no real coherence as to how issues are discussed and contemplated (or debated and contested) in the scholarly arena. This paper seeks to paint the diversity and richness of these emerging ecosystem services approaches through a systematic examination of key characteristics that aid in differentiating them in terms of their likely viability or performance. Such takes the form of a heuristic framework, elaborated through the lens of 10 heuristic analytical fields. The hope is to lend some 'ordered or systematic neatness' as an aid to discussing and disentangling some of the inevitable 'messiness' that arises in the context of ecosystem services governance alternatives. It is proffered that a more open embrace of hybridity in institutional arrangements may offer a way forward as ES governance alternatives continue to be explored and conceived.

2.2 Introduction

> *"The widespread assumption that the state is on the retreat necessitates thinking about how, by whom, at what spatial scales, and with what social and territorial consequences are emerging spaces of 'environmental governance' being colonized." (Jonas and Bridge, 2003, p. 962)*

It is widely acknowledged that the process of governing the environment in Canada (and elsewhere) has shifted in recent times from one of exercising direct authoritarian control, to one of working collaboratively with a diverse array of stakeholders in the development of policy frameworks, to even one where government policy is sometimes usurped by the organized actions

of civil society and the interests of concerned consumers (Bryant and Wilson 1998; Jonas and Bridge 2003). This turning of the tides is evidenced in many examples of environmental initiatives wherein community involvement is no longer mandated from above but rather empowered from below and within (e.g., see Holmes et al. 2002; Caldwell et al. 1999; Lickers and Story 1997). From a traditionally state-led and technocratic approach to dealing with environmental problems has emerged a more holistic, inclusive, and empowering form of environmental governance – a 'rediscovery of the social' for Higgins and Lockie (2002).

This trend toward the 'privatization' of environmental governance has generated considerable debate in scholarly circles, and not all are convinced that it ought to be fêted. Rather than manifesting as a purely dichotomous pitting of public versus private, however, increasingly the discourse in the literature is taking on a more nuanced expression of how new *intersections* of public and private are shaping environmental governance. Nowhere is this casting of novel intersections of public and private more evident than in the burgeoning scholarship on ecosystem services (ES). Clearly, the ecosystem services paradigm has captured the imagination and interest of scholars and conservation practitioners alike (Liverman 2004). In little more than a decade, an impressive body of scholarly work has emerged under the rubric of ecosystem services, with the 'public good' nature of stewardship thrust into the limelight (Dibden et al. 2009; Pierce 1996). The newly-emergent perspective holds thus: given that individual landowners or 'stewards' are expected to bear the responsibility of meeting heightened standards of environmental protection through additional expenditures or foregone development opportunities, and yet society at large reaps the environmental benefits, these landowners should be remunerated by society. The burgeoning scholarship wrestles in particular with philosophical and ideological points of contention spanning issues of 'duty of care' (e.g., O'Neill 2001; Worrell and Appleby 1999) and the dangers of motivational crowding (see Reeson and Tisdell 2008; Frey and Oberholzer-Gee 1997), and equally grapples with how the paradigm might serve to engender a bridging or rapprochement of the rural-urban disconnect (Gutman 2007).

Setting aside the many philosophical and ideological points of contention, there are vexing questions of a more pragmatic nature that emerge in considering how one might remunerate or reward landowners for the provisioning of ecosystem services. For instance, what constitutes going the extra step towards protecting ecosystem services (beyond what might represent a moral obligation) and how is that translated into payment? Are there workable forms of recognition that extend beyond purely financial ones? Further, how does one separate the ecological (and attendant) benefits reaped by the private landowner versus those that accrue to society more

broadly? As many landowners will readily admit, stewardship is not always undertaken on purely altruistic grounds. In some cases, it simply makes business sense. While there may be grounds for remuneration in some cases (where a public good is clearly protected by management actions) discerning the delimitations of those grounds remains a murky business.

In spite of the many unresolved issues, programs for remunerating landowners for the provisioning of ecosystem services are proliferating around the globe. In Costa Rica, a nation-wide framework of payment for ecosystem services is supported by the state, in large part through revenues derived from a fossil fuel sales tax (Pagiola 2008). In Australia, 'conservation tenders' are used to encourage and reward the provisioning of ecosystem services by landowners through programs like EcoTender and Bush Tender (see Eigenraam et. al 2007; Stoneham et al. 2003). Throughout the world, there are many other examples of programs that reward landowners for the provisioning of ecosystem services. In Canada, meanwhile, ecosystem services approaches and programs have been slower to develop (as reflected in the paucity of scholarly articles on ecosystem services-related research specific to the Canadian context; this aperture serving as an impetus for the research at hand). A widely-referenced Canadian example of rewarding farmers for the provisioning of ecosystem services is the Alternative Land Use Services (ALUS) approach (e.g., Baxter 2011; Canadian Institute for Environmental Law and Policy 2010; CFFO 2010). While still in its early days, emerging assessments point to the potential value of the ALUS approach to enhance the flow of ecosystem services to society and to better reward farmers for the critical role they play as environmental stewards (e.g., MacKenzie 2008; Tyrchniewicz and Tyrchniewicz 2007).

The overarching aim of this paper is to paint the diversity and richness of these emerging ecosystem services approaches through a systematic examination of key characteristics that aid in differentiating them in terms of their likely viability or performance. What is particularly striking in relation to the scholarship on ecosystem services governance is the marked *heterogeneity* in approaches. The vast array of rapidly developing ecosystem services approaches vary considerably in form, in how they are implemented, and in the issues they grapple with or are beset by. And, interest is clearly swelling – capturing the attention of scholars and, likewise, harnessing the creative energies of practitioners in the conservation community. Yet, amidst this backdrop, there is no real coherence as to how issues are discussed and contemplated (or debated and contested) in the scholarly arena.

The more specific aim is to develop a structure or anatomy of sorts to discuss and explore this heterogeneity; such takes the form of a heuristic framework (elaborated through the lens of

10 heuristic analytical fields). The hope is to lend some 'ordered or systematic neatness' as an aid to discussing and disentangling some of the inevitable 'messiness' that arises in the context of ecosystem services governance alternatives. As the empirical richness in this field of study grows, having such a framework in place offers an opening for unlocking the theoretical, for moving beyond what might be argued to be a largely atheoretical basis at present. It is the author's hope that the exploratory contemplations that follow respond in some measure to the call by Fletcher and Brietling (2012) for a closer examination and closing of the "gaps between vision and execution in neoliberal conservation governance." In equal measure, the development of the framework is driven by practical interests and concerns, with the aspiration that it serves a real-world applicability for those developing and delivering ES programs and policies.

2.3 Methodology

While borrowing methodologically from Holloway et al. (2007) in their contemplations of alternative food networks, the framework presented in this paper represents an original work in the field of ES governance (nowhere, to the author's best knowledge, are a set of like heuristic analytical fields expounded in similar systematic fashion). An extensive literature review entailing a wide-ranging sweep of both the scholarly and applied literatures (a high-level reconnaissance or 'flyover' of sorts) was undertaken to identify from a structural and operational perspective the characteristics that serve a helpful role in assessing the likely viability or performance of a given ecosystem services approach. Is there a systematic way to describe and contrast differences in approaches? And, moreover, how might such differences influence performance or viability under given circumstances, and hence the choice of a particular approach over another? Reflection upon the many and varied ES recognition/remuneration approaches elaborated in the literature led to the subsequent development of 10 heuristic analytical fields that form the centrepiece of the analysis and discussion that follows.

In exploring the 10 heuristic analytical fields, an array of ES programs or architectures are considered. These are in no way intended to represent a comprehensive works. Such would be an unrealizable undertaking given the delimitations of scope for this paper and, moreover, the fast-paced and ongoing proliferation of ES approaches around the globe. [The volume of scholarly research on ES as compared to a mere decade ago is striking; see Seppelt et al. (2011) for a quantitative review of ecosystem services studies.] Rather, those selected are meant to be illustrative of the far-ranging spectrum of approaches or mechanisms that exist (i.e., are illustrative of the 'heterogeneity' with which the heuristic framework engages), and can be

characterized as having garnered some interest in both scholarly and stewardship practitioner circles.

While the paper draws principally on a reconnaissance of the scholarly literature, it is also shaped (unapologetically so) by the author's experience spanning two decades as a practitioner in the field of environmental conservation. This 'situatedness' straddling researcher and practitioner offered a unique windowpane through which to reflect introspectively and critically on the issues. In this respect, adopting a heuristic approach held particular appeal. From the Greek word, *heuriskein*, meaning to discover or to find, the author's embrace of the approach is in many ways consistent with Moustakas' experience of heuristic processes:

> *"In the process of a heuristic search, I may challenge, confront, or even doubt my understanding of a human concern or issue; but when I persist in a disciplined and devoted way I ultimately deepen my knowledge of the phenomenon. In the heuristic process, I am personally involved. I am searching for qualities, conditions, and relationships that underlie a fundamental question, issue, or concern . . . Whatever the effect, the heuristic process requires a return to the self, a recognition of self-awareness, and a valuing of one's own experience." (1990, p. 11)*

To a certain extent, the paper is also informed by empirical insights garnered through a complementary part of the research effort that sought to assess the interests of private landowners, and program and policy professionals, for a range of ecosystem services governance mechanisms. This, too, accords with Moustakas' elucidation of the heuristic process, as one which seeks to deepen and extend understanding "through the eyes and voices of others."

2.4 A Heuristic Framework for Exploring Governance Alternatives in the Provisioning of Ecosystem Services

Before turning to the central thrust of the paper (i.e., the elaboration of the heuristic framework), first a brief sketch of three key themes or essences in the scholarship bearing particular resonance for the research at hand: (i) growing faith in the private market as a mechanism for enhancing the provisioning of ecosystem services; (ii) mounting tensions between the landowner community and civil society; and, (iii) calls for hybrid approaches to environmental governance. The heuristic analytical fields considered henceforth are shaped by an appreciation of these themes, or, put in a slightly different way, find expression in contemplating these themes (as explored more deeply throughout the paper).

First, to the private market. As averred by Liverman (2004), there has been a fundamental reconceptualization of society-nature relations as the private market has come into vogue as a mechanism for governing and safeguarding ecosystem services. Under the emerging ES paradigm, environmental amenities and qualities are re-cast as commodities for trade (a philosophically-charged issue in its own right; see Sagoff 2002). In the words of Robertson (2004), there is a "growing belief that conservation is best approached with a CEO's sensibility." Faith in price signals and *homo economicus* form the foundational pillars for arguments that the private market holds promise for securing environmental commitments (in ways that traditional command and control policy approaches have been unable). Despite the growing lure of the private market, questions of legitimacy and power pervade the scholarship. Klooster (2005), for instance, in examining the case of forest certification, highlights the imbalance of power between large retailers and small forest managers, the latter of whom shoulder the costs of the ecological and social improvements to forest management (while the former are afforded the accolades for embracing certification and arguably the profits as well). As he so eloquently expresses this:

> *"Mainstreaming environmental governance through the power of retailers represents a Faustian bargain that marginalizes small and community forest managers, shifting the costs of environmental management but without providing them with the means to cover these costs." (p. 415)*

What might such concerns intimate for the conceptualization of ES governance alternatives? The question of who has a responsibility to invest and at 'whose behest' does not always yield an unambiguous answer. Nor does the oftentimes-supposed primacy of rational self-interest always hold true. This matter is taken up later in the paper.

A second theme of interest concerns growing tensions between the private landowner community and civil society broadly and related calls for a new social compact (see, for instance, Gutman 2007). Considerable impetus for the ecosystem services paradigm has come from a private landowner community frustrated by heightened demands for environmental protection that fail to recognize the oftentimes significant outlays of capital – both human and financial – that are invested on the part of the private landowner community to deliver what is a largely a public good. Simply put, the concept underpinning remuneration for ecosystem services is recognition by the wider community of the stewardship role of those living and working on the land (Cocklin et al. 2006). Yet, by what mechanism(s) is this to be achieved? What is the willingness of society to contribute or pay? How might such responsibilities be shared? The scholarship wrestles in particular with questions of how new forms of advocacy and civic

engagement may shape power differentials, bringing new contestations about the countryside (e.g., Caldwell and Dodds-Weir 2007; Ferreyra et al. 2008). This casting of a wider set of actors with decision-making influence raises some intriguing questions with respect to whose priorities count, and who decides, as explored in the heuristic framework.

A third theme of interest concerns appeals for greater acceptance of 'hybridity' in institutional arrangements. Sinclair (1997) challenges what he views as an imagined dichotomy between state and non-state governance:

> *"Unfortunately, our current repertoire of regulatory descriptors has unnecessarily handicapped policymakers into persisting with an unhelpful dichotomous mentality." (p. 552)*

He argues a much richer range of hybrid approaches in offering solutions to complex, context-specific environmental problems. This relevance of hybrid approaches resonates with others as well (Bressers et al. 2009; de Loe and Bjornlund 2008; Penker 2008). Might an embrace of such hybrid arrangements offer a potential resolution or way forward for ES governance? Particularly in light of some of the afore-mentioned tensions, in which an evolving and widening cast of actors looms large?

In light of this context, what shape might a governance instrument supportive of the provisioning of ES take? With many complex and thorny issues to consider – ranging from the deeply philosophical to the pre-eminently practical – it is anything but an undemanding task, casting ES optimists and cynics together on a messy stage. The heuristic framework elaborated in the pages that follow offers a means of disentangling and systematically exploring some of this messiness, with the aim of bringing to light how contemplations of the heuristic analytical fields in question might influence the performance or viability of ES programs, and, thus, program design and policy decisions. Table 2.1 serves to capture the 10 heuristic analytic fields in abridged form, while the narrative that follows reflects on each in detail. Reference is regularly made to a suite of approaches that exemplify the vast heterogeneity in form and function of ES approaches (again, see Table 2.1); these serve an illustrative purpose in exploring heuristic analytical fields 1through 10. They include: Alternative Land Use Services or 'ALUS' (Canada);

Table 2.1: A heuristic framework for exploring governance alternatives for the provisioning of ecosystem services

	1	2	3	4	5	6	7	8	9	10
Heuristic fields	**Initiated / administered by whom (e.g., State, NGO, other)**	**Reactionary or anticipatory**	**Financing structure / resourced by**	**Scale of implementation (e.g., highly localized vs broad-scale)**	**Inclusivity of landowner participants or ES 'providers'**	**What ecosystem service(s) / who decides**	**Mode of delivery**	**Form of landowner support/ incentive/ recognition**	**Nature of landowner commitment**	**Nature of monitoring / auditing / verification of outcomes**
Illustrative Case										
Alternative Land Use Services, ALUS, Norfolk Pilot **(Ontario, Canada)**	Norfolk Land Stewardship Council (quasi-gov't, arms-length)	Calls for more equitable sharing of costs of stewardship and greater recognition of the role of that farmers play in providing critical services	Gov't NGOs Private foundations and donors	County (pilot-scale efforts elsewhere in Canada; and province-wide implementation in PEI)	All	Not explicit (based on practices rather than explicit services)	Farmer submits expression of interest, followed by site visit to determine areas of farm most suitable for an ALUS project; farmer signs term agreement to provide services	Fee-for-service (based on land rental rates)	Term agreement to enhance and maintain "nature's services" (typically 3-5 years, with possibility for extension)	No strict auditing of environmental *outcomes* per se (being explored); *projects* are monitored by ALUS staff and independently audited by an existing farm organization/ institution
***EcoTender*, (Australia)**	DSE, State of Victoria	Critical issues of salinization	Gov't	State	All	Water Carbon Biodiversity	Competitive bid	Annual payments	5-year contractual arrangement or option for permanent protection	Payments rescinded if contract breached; percentage of sites visited in a given year; Uses modelling tool to assess environmental outcomes

Environmental Farm Plan Program, EFP **(Ontario, Canada)**	Various, Ontario Soil and Crop Association in Ontario (non-profit farm organization)	Calls for more environmentally responsible farming	Gov't (federal and provincial)	Ontario and (later) country-wide	All	Not explicit (based on Best Management Practices)	Self-assessment of environmental performance through workshop participation and farm action plan development	Cost-share grant	Commit to developing and adhering to peer-reviewed action plan	Peer-to-peer assessment; cost-share contingent on implementing specific BMPs identified in action plan
Environmental Stewardship, Entry Level Stewardship Scheme **(United Kingdom)**	DEFRA *and* Natural England (NGO)	Shifting support from production-based policies to those reflecting the multi-functionality of agriculture	Gov't	Country	All	Not explicit (menu of management options from which farmers choose)	Prepare simple Farm Environmental Record	Annual payments (fixed)	5-year contractual arrangement	Payments rescinded if identified actions not met; percentage of sites visited in a given year
****Higher Level Stewardship Scheme***	As above	As above	Gov't	Country	Discretionary	As above, but requiring a more demanding level of management	Prepare Farm Environmental Record *and* detailed management plan	Annual payments (vary according to actions undertaken)	10-year contractual arrangement	As above
Forest Certification Program, EOMF **(Ontario, Canada)**	Eastern Ontario Model Forest (NGO)	Calls for more responsible forest management Issues of forest industry accountability, credibility (fueled by boycotts)	EOMF through various funding avenues (e.g., private foundations, donors; government) Nominal fees paid by certified participants	Regional / provincial	All	Not explicit	Management plan developed in adherence to Forest Stewardship Council of Canada principles and standards	Administrative support Technical support Information sharing / networking	Contractual arrangement to adhere to FSC principles and standards, and undergo audit	Third-party audit (annual and five-year)

Pago por Servicios Ambientales, PSA **(Costa Rica)**	FONAFIFO (semi-autonomous agency with legal status)	Critical issues of deforestation	National fuel tax World Bank loan Global Environment Facility (international development funds) Private companies/services users (to a limited extent)	Country	All	Water Biodiversity Carbon Scenic beauty	Must present a sustainable forest management plan prepared by licenced forester; payments upon adopting specified practices therein	Annual payments	Contractual arrangement to provide ecosystem services	Sample audited; weak in monitoring environmental outcomes
Payments for Bird Habitat and Watershed Protection **(Bolivia)**	Fundacion Natura Bolivia (NGO)	Critical issues of increasing water scarcity	U.S. Fish and Wildlife Service Downstream irrigators via Municipality	Small-scale pilot	All	Biodiversity Water	Landowner enrolls forest plots that will serve as 'conservation parcels'; payments are made annually and honoured contracts can be re-enrolled in subsequent years	In-kind annual payment Technical assistance	Adherence to forest conservation stipulations set out in annual contract; contracts ranging in length from 1-10 years	Compliance monitoring focused on land use rather than environmental outcomes

EcoTender (Australia); the Environmental Farm Plan (EFP) program (Canada); Environmental Stewardship (U.K.); the Forest Certification Program of the Eastern Ontario Model Forest (Canada); the Pago por Servicios Ambientales (PSA) program (Costa Rica); and, a program of payments for bird habitat and watershed protection in the Los Negros Valley (Bolivia).

2.4.1 Administered / Delivered by Whom (Heuristic Analytical Field 1)

A pivotal concern in the design of any ES recognition/remuneration architecture is that of *who* is responsible for administering or delivering it. In both scholarly discourse and policy circles, issues of trust, transparency, and delivery agent credibility hove into view. One might expect the viability of a given ES architecture to be strongly influenced by such considerations. Elmendorf (2003), in a discussion of incentives, gifts and governance supportive of stewardship on private lands, underscores the importance of agency personnel establishing personal relationships with private landowners. Such relationships can be generative of mutual trust and understanding – in Elmendorf's words, causing "hostilities to soften" and engendering viewpoints and actions supportive of stewardship. Elsewhere in the scholarship, this notion is captured by the term 'relations of regard,' where reciprocity and reflexivity figure prominently (as, for instance, in the alternative food systems literature).

An attribute of several of the programs highlighted in Table 2.1 is that they are delivered by a non-government organization (NGO) or some form of organization or agency at arms-length from government. While the scholarship in relation to these specific programs is non-committal in addressing squarely whether this attribute has contributed in a significant way to program viability, anecdotal evidence suggests that such may indeed be the case (as does empirical evidence from a complementary part of the research project). Jepson (2005), in bringing into focus the expanded role of NGOs in recent times, is quick to note that they, much like their government counterparts, can risk losing public trust and support if they fail to develop a credible accountability regime (particularly as they grow in 'stature' and become part of the power structure).

Vatn (2005) touches on a further line of thought relevant to the analytical field at hand. In a storyline reminiscent of Giddens (1998), he reflects on how institutions serve as structures that *enable* people to act – rather than acting purely as *constraining structures* on behaviour. One might thus give pause to how the strengths and experiences of those responsible for administering and delivering ES programs best capitalize on the concept of enabling. How do they serve as enablers in inciting stewardship and the provisioning of ES by private landowners? Perhaps it is

taking the time for a kitchen table conversation with a farmer, or walking a woodlot with a woodlot owner. Perhaps it is simply listening to the airing of a grievance or concern about a species at risk, or learning more about the constraints that preclude stewardship actions and how they might be surmounted. In a closely related vein, the extent to which delivery agents or organizations are 'in touch' with the day-to-day realities of landowners might be expected to impinge on program design and uptake. In the words of Monte Hummel (1999, p. 110):

> *"The fact that so many of the conservation movement's ideas are seen as being insensitive to local interests, or pushed through despite them, has left a legacy of bitterness and an understandable image of conservation advocates being urban thinkers out of touch with rural reality."*

Wellstead and Stedman (2010) take up a similar line of thinking in their piece on policy capacity (and incapacity) in Canada's federal government, making the case that all too often policy options are "too removed from on the ground considerations."

2.4.2 Reactionary or Anticipatory (Heuristic Analytical Field 2)

The very workings of the genesis of an ES recognition/remuneration approach may elicit responses that influence its viability. For instance, is it developed as a reactive or proactive measure? Is it in response to a perceived crisis or a pre-emptive effort to stem what might foreseeably lead to some ecological harms? In the case of Costa Rica's Pago por Servicios Ambientales (PSA) program, a devastating crisis marked by extensive forest loss spurred action and political support for a nation-wide program of payments for ecosystem services. Similarly, widespread and acute salinization prompted EcoTender and similar initiatives in Australia. If it is in human nature to tend to act only in the face or crisis or emergency, one might expect support for ES approaches to languish in contexts where there may be no readily perceived ecological threat, even where a threat may exist (such is entirely consistent with the agricultural conservation practices literature on adoption, in which the observability of a problem is recognized as a core factor in explaining adoption.). In considering an ES architecture, this latter inference has interesting ramifications with respect to generating public and political support. In the absence of an out-and-out crisis, how might one go about generating the necessary will and support for an ES program? It is here that the danger of acting in only reactive fashion rears a rather ugly head – with potentially ill-fated ecological consequences. As such, the matter of how messaging about ecological issues and concerns is framed could be of great import in engendering support for ES programs. Nordhaus and Shellenger (2007) in their provocative

book, *Breakthrough: From the Death of Environmentalism to the Politics of Possibility*, lay bare how the 'doomsday discourse' of environmentalism has in many ways proved a disservice to the movement, alienating rather than inspiring civil society to act.

> *"Environmentalism offered something profoundly important to America and the world. It inspired an appreciation for, and an awe of the beauty and majesty of, the nonhuman world. It focused our attention on future generations and our responsibility toward them . . . But environmentalism has also saddled us with the albatross we call the politics of limits, which seeks to constrain human ambition, aspiration, and power rather than unleash and direct them." (p. 16)*

Their call for a 'politics of possibility' in the place of a 'politics of limits' might serve as wise counsel for those championing and developing ES approaches as well.

Extending the analysis, it seems important to consider the segment of the population generating ecosystem protection 'appeals' and what this means for program design and viability. A largely urbanite population, arguably removed from the concerns of work-a-day farm life, might well call for greater protection of species at risk and their habitats. In the absence of provisions that recognize and address potential threats to one's way of life, an ES program may face strong resistance from the private landowner community (e.g., Elmendorf, 2003; Shogren 2005), particularly when ecosystem protection appeals are interpreted as coming from a populace largely oblivious or insensitive to the realities of eking out a livelihood on a working farm or woodlot. Indeed, much of the success behind Canada's Environmental Farm Plan (EFP) program can be attributed to its 'farmer-initiated and farmer-led' underpinning, notwithstanding criticisms from some quarters that call into question the possible privileging of farmer views given that the process is based on self-assessment and peer-to-peer review, with the possible upshot of limiting transparency (Robinson 2006).

Elsewhere in the scholarship concerns are raised about power asymmetries that may arise with the embrace of governance models spanning the broader political community. In southern Ontario, for example, new forms of advocacy and civic engagement are emerging with ongoing processes of urban-to-rural migration (Caldwell and Dodds-Wier 2007; Hilts 1997). Such processes not only bring new actors into agricultural areas, but also new contestations about the countryside. The end effect, in some instances, is one which sees farm and non-farm residents pitted one against the other. A new wielding of power may emerge, for instance giving non-farm residents greater sway in decisions concerning the disposal of manure, creating ongoing tensions and disputes (Ferreyra et al. 2008). Clark et al. (2007), meanwhile, raise the issue of the potential

for ‘elitist’ forms of governance that engage the established elite of active citizenry while failing to provide an open-door policy to the community at large. These concerns serve to further illustrate the importance of considering carefully aspects of what drives a program’s genesis (and who holds sway in that genesis).

2.4.3 Financing Structure / Resourced by (Heuristic Analytical Field 3)

The scholarship is evidence to a plethora of ES mechanisms and approaches that have emerged in recent times. Of note is the multiplicity in how such approaches are resourced (i.e., how they are supported or structured in a financial sense). This spans those supported primarily by government agencies and departments, through those supported by non-government organizations, private foundations and donors, companies and businesses – or, quite often typified by some combination thereof – as well as ES beneficiaries and users (the latter, it might be argued, to a much lesser extent). In the case of Costa Rica’s PSA program, financing is derived primarily from a national fuel tax, though supplemented in great degree through a loan from the World Bank and funding from the Global Environment Facility. In Bolivia, a small-scale program of payments for bird habitat and watershed services relies on funding from an international source (the U.S. Fish and Wildlife Service, who has a vested interest in migratory bird habitat), as well as contributions from downstream users via a local municipality. By way of a further example, with yet an altogether different financing structure, the Forest Certification Program of the Eastern Ontario Model Forest is supported by government, non-profit community development organizations, private donors and foundations, and a contribution by those certified in the program to help offset audit and related costs.

A frequently-cited challenge to the success of ES programs is that of securing adequate and stable funding to support efforts in the long run (Jack et al. 2008). In contemplating the design of an ES approach, this represents a critical issue. One could imagine how instabilities in funding might result in landowner apprehension to participate in the first place, and, equally, how a sudden loss or scaling back of funding mid-stream could result in loss of program credibility. In a slightly different scenario, one could imagine how a shift in political leadership, and thenceforth support for a national fuel tax, might put the PSA program in jeopardy. Clearly there is a need to take care in scoping out how a program might be resourced, with an eye to the long-term. Borrowing from the concept of structural diversity in the fields of ecology and forest management, a strategy of diversifying funding sources might be expected to reduce risk.

An inter-related question in examining this analytical field is thus: *who* has a responsibility or duty to invest? Ecosystem service users? Companies that pollute? Governments? Landowners themselves in some measure, as a show of commitment to stewardship? Actors in all facets of civil society? Determining this, as suggested by Kline et al. (2009), is shaped profoundly by how we allocate rights and responsibilities. Gutman (2007) calls for a new rural-urban compact that would incent and reward efforts to care for the environment. In his imagining of such a compact, the ongoing delivery of food and fibres would go hand-in-glove with the protection of ecosystem services, and the enhancement of income opportunities of the rural population. He implicates both rural and urban populations as having to ante up in realizing such a compact, with specific reference to ecosystem services. Not one to mince his words, he asserts:

> *"Now it is high time for cities to pay for them, and for the rural areas to do a better job as their providers." (p. 385)*

While a sharing of the responsibilities and costs associated with providing and safeguarding ES seems most likely to afford an equitable solution, discerning the delimitations of what represents 'fair and equitable' can be exceptionally challenging. Perhaps there is a cue to be taken from the ever-growing body of work on collaborative, deliberative processes of environmental governance, a discussion developed later in the paper.

2.4.4 Scale of Implementation (Heuristic Analytical Field 4)

The scale at which an ES program is implemented raises some fundamental design considerations. Is a program highly-localized, or broad-scale in nature? Examples in the literature cover a wide-ranging spectrum in this regard. Whereas the Alternative Land Use Services (ALUS) program is more localized in nature, Environmental Stewardship spans the geographic entirety of the U.K. Likewise, Costa Rica's PSA program is delivered country-wide. A manifest implication in relation to scale of implementation is that of how programs are resourced, both financially and in terms of human capital. While intuition might lead one (in some cases legitimately) to imagine difficulties in resourcing programs implemented at broader scales and across larger geographies, it would seem that the same can hold true for highly localized programs. The ALUS project in Norfolk County, Ontario, serves as a case in point, where it has required an exceedingly 'heroic' effort on the part of program delivery personnel (and ALUS champions) to sustain efforts, in a financial sense, on a county-wide scale (notwithstanding more recent and significant financial infusions through the W. Garfield Weston

Foundation). A 2011 article in the popular magazine *Better Farming* (see Baxter 2011) calls attention to how ALUS (and ecosystem services programs in general) have been "inhibited by funding problems."

The question of scale of implementation also raises issues of investments in, and complexity of monitoring ecological outcomes. For instance, how might the monitoring of ecological outcomes be achieved on a country-wide basis as compared to a much narrower watershed-scale basis? With a more 'diffuse' delivery across large geographic landscapes (as in the case of the PSA program and EcoTender), one might imagine a need for greater investments (both financial and human) in monitoring-related activities. [It is worth noting EcoTender's innovative use of a catchment modelling tool to link on-site actions with both on-site and off-site ecological outcomes; such might arguably trim down on monitoring costs, notwithstanding the presumably vital need for on-the-ground appraisals or assessments.] In a related vein, it is important to consider the spatial configuration of landowner participation on ensuing ecological outcomes (e.g., Reeson et al. 2011; Parkhurst and Shogren 2007). Kittredge (2005) makes a convincing case for galvanizing the cooperation of private forest owners on scales larger than an individual property. Rickenbach et al. (2011), in much the same vein, believe that cross-boundary cooperation holds promise as a mechanism for sustaining ecosystem services from private lands. Elsewhere, the agglomeration bonus is introduced as a novel tool (from a spatial point of view) that could serve to enhance ecological outcomes (Parkhurst et al. 2002). An agglomeration bonus is, in essence, an incentive that encourages neighbouring landowners to enrol adjacent lands in a program. These might be lands that are retired completely from cultivation or harvesting (such as in the Conservation Reserve Program in the U.S.), or lands on which neighbouring landowners agree to undertake certain well-defined and targeted stewardship activities. Such a bonus might be quite indispensable, for instance, in efforts to enhance riparian habitat or forest connectivity (one could envision how significant spatial gaps in stewardship activities might preclude, indeed doom, desired ecological outcomes).

Prager (2010) lends yet another angle of interest to the discussion of scale of implementation: the challenge of bridging institutional levels. He points to the difficulties in scaling up efforts from the local to the regional, using the example of Australia's local Landcare groups and more recently instituted regional natural resource management (NRM) bodies.
A related issue to consider is that of consistency in delivery of programs while nevertheless accommodating flexibility in design. That aspects of a program may need to be tailored to certain 'geographies within geographies' seems inevitable, particularly in programs that are broad in

scale, covering diverse landscapes (both ecological and *socio-cultural* landscapes).

2.4.5 Inclusivity of Landowner Participants or ES 'Providers' (Heuristic Analytical Field 5)

In contemplating the design of an ES architecture, the question of whether it is inclusive or exclusive in nature raises some profound issues related to notions of equity and fairness. Whereas some programs may be open to all (as in the case of EcoTender and the U.K.'s Entry Level tier of Environmental Stewardship), others may be discretionary in nature (as with the Higher Level tier of Environmental Stewardship). While a discretionary construct may be adopted for pragmatic reasons (such as being unavoidably mindful of resource constraints), the argument might be made that it may be seen to fly in the face of what is equitable and fair. Intuition might lead one to put forward the thesis, for instance, that an ES program targeting those landscapes most highly degraded or most ecologically sensitive might 'stir unhappiness' in the landowner community by excluding some from participating (and possibly rewarding those actors who have engaged in the most ecologically-destructive ways). Arbuckle Jr. (2013) refutes this assumption, showing in his Iowa-based study that targeted conservation (i.e., conservation that proactively targets limited resources to areas most vulnerable on the landscape) was "strongly endorsed" by farmers. He asserts, "…the implicit assumption that farmers would resist targeted conservation approaches is largely unfounded." As Arbuckle Jr. himself affirms, however, there has been little empirical study (excepting his Iowa study). As such, for those developing ES programs, it is an issue that might warrant a closer look through a context-specific lens. It is worth noting in the course of this discussion on inclusivity/exclusivity that an approach taken in Environmental Stewardship has been to couple the use of target areas (i.e., landscapes) and target *themes* (e.g., enhancing habitat for species at risk might be a theme of interest in a given year), opening participation to a broader complement of participants, while still preserving an attentiveness to spatially-targeted conservation.

Another pragmatic matter concerns the degree to which landowner participation can be supported in a given ES program. An 'open door' policy, for instance, may result in participation outstripping available funding (such has been the case, for instance, in the Environmental Farm Plan program). One might expect that the more inclusive a program is structured to be, the more funding it is likely to require. Should funding requirements fall short of demands in uptake, the question of equitability again surfaces. A related matter of resourcing is that of access to field staff (or, in broadest terms, delivery agent accessibility). While one could imagine a vital need for technical or one-on-one support for landowners participating in an ES program, it might be

prohibitively expensive or simply unworkable in a program open to the masses. Milburn et al. (2010) lament the decline of agricultural extension in Canada in recent decades, fearing "the beginning of the end" has arrived, with unfortunate consequences for stewardship. Assessing the value that landowners place on personal interaction with field staff, and thinking critically about how to best accommodate needs and desires for such interaction, might thus seem a requisite in designing any ES architecture.

2.4.6 What Ecosystem Services / Who Decides (Heuristic Analytical Field 6)

Defining the types of ecosystem services to be recognized in an ES program might, at first blush, seem a simple task. However, efforts to do so have been seemingly less straight-forward in practice. In their seminal (and much-contested) piece on the value of the world's ecosystem services, Costanza et al. (1997) identify 17 services. Subsequent works by scholars and others tend to adopt a categorization that uses the broad brush strokes of 'provisioning', 'regulating,' and 'cultural' services (e.g., Millennium Ecosystem Assessment, 2005; de Groot et al. 2002). Yet, such categorizations have led to tangled (and more than just semantic) debates about the legitimacy of dissociating ecosystems into component services: in the words of Norgaard and Bode (1998), an "atomistic approach . . . that defies our understanding of ecosystems."

Nonetheless, attempts have been made to surmount such problematic matters in the development of ES programs. In the case of the PSA program, legislation has been enacted (under the auspices of Forest Law 7575) that formally recognizes four explicit ecosystem services: water services; biodiversity; carbon sequestration; and, scenic beauty for recreation and ecotourism. Water, carbon and biodiversity constitute the suite of services recognized in the case of EcoTender. The pairing of bird habitat and water services defines the Bolivian program. Many programs are more nebulous when it comes to characterizing services recognized, often relying on proxies in the form of land practices (e.g., such as best management practices in the case of the Environmental Farm Plan program, which does not neatly fit the mold of an ES program as such, but arguably incorporates elements of a would-be ES program). Environmental Stewardship in the U.K., like the Environmental Farm Plan program, focuses on stewardship actions rather than well-defined services. The distinction between rewarding a landowner for an action (or set of actions) and the provisioning of an actual service (or suite of services) leads to the inevitable question of whether payments or incentives for the provision of ecosystem services should be based on action or results. As noted by Gibbons et al. (2011), there is a divide among scholars in this regard. While some advocate the imperative of making payments on the basis of

outcomes (e.g., see Hanley et al. 2012 for a discussion of this), others seem less resolute, even accepting of circumstances under which payments might be made on the basis of action. Yet, it may be that action in and of itself is an insufficient yardstick in the eyes of some. If society at large is called upon to make investments supportive of the provisioning of ecosystem services, the implied contract, surely, will be that landowners deliver on the promise of providing them – in which case, there may be heightened public demands for outcomes-based metrics (for instance, such might take the form of a watershed report card that demonstrates improvements or deteriorations in water quality based on quantifiable measures).

From a sociological perspective, one might ask another important question: who has a role in determining what ecosystem services are recognized or considered? So-called experts? Laypeople? Those providing the services? Those receiving the services? One could imagine how this might be contentious, and lead to tensions in the development of an ES architecture. On the whole, there seems a paucity of scholarship to provide voice to this issue. While an immense and ever-growing literature on participatory and deliberative processes exists, the ES literature seems rather hushed in this regard. As intimated by Seppelt et al. (2011), it would seem a matter deserving of further attention. In considering the 'road ahead' for ecosystem services research, they allude to the importance of stakeholder involvement as a "method to gain a wider picture" in the identification of ecosystem services, the ground-truthing of management options, and the evaluation of possible management options.

Further reflection from a political viewpoint calls to mind the issue of whether it might be advantageous in developing an ES program to consider those services with high profile or visibility in the public eye (i.e., those that may be most politically palatable). For instance, most people understand the vital importance of clean, abundant water in ensuring human survival. Water, as something that is relatable in every human's life, might arguably garner more support from the masses as an ecosystem service that ought to be recognized in an ES program. To play devil's advocate, one could equally argue that playing to such politics may be a dangerous game. What should happen if the political winds change? It might also be argued that a focus on ecosystem services with high visibility yet set in highly politically-charged contexts may in fact stymie the development of an ES program. One could imagine, for instance, how the viability of an ES program focussed on species at risk in eastern Ontario – the heartland of the landowner right's movement in Canada – might be fraught. Such a context might also provide the very political impetus (and explosiveness!) needed to see the beginnings of an ES program take shape. In the final analysis, the market purists would surely argue that the focus needs to be on those

ecosystem services that are in short supply and most sought after (something Adam Smith's 'invisible hand' should discern). In any event, in an age where there is a constant vying for political support for environmental causes, with finite funds to go around, perhaps there is some merit in taking pause to consider, in a thoughtful way, the types of ecosystem services to be included in an ES architecture. How ecosystem services come to be defined and included in an ES architecture, and who has a say in making those determinations, could impinge heavily on program viability.

The preceding discussion inevitably moves us beyond the question of 'who decides' with specific reference to the types of ecosystem services recognized to the wider issue of stakeholder engagement in ES decision making and program design. Premised upon the principles of democracy and participatory inclusiveness, collaborative governance models have come increasingly into vogue in response to ineffective top-down, bureaucratic approaches. In such models, decision making is not relegated to an exclusive elite or 'expert' group, but rather becomes an arena for collective deliberation. This has understandable appeal on the grounds of fairness, opportunity to shape and influence decisions, and, ultimately, the legitimacy of decisions taken. A seeming advocate in this regard, Fish (2011) draws attention to the imperative of managing ecosystem services in view of wider stakeholder values, needs and priorities. [Knuppe and Pahl-Wostl (2011), meanwhile, in their study of intensive groundwater use in the Upper Guadiana Basin in Spain, paint a compelling picture of how conflict can result from the exclusion of stakeholders in the planning process.] Fish, in elaborating his vision of an ecosystems approach (EsA) that "harnesses creatively" the concept of ecosystem services, argues, moreover, the need to more fully embrace the expertise and creative inspiration available to us by moving beyond 'ready-made' communities of interest:

> *"Just as there is a need to engage with a broad constituency of scholars and policy practitioners in the theoretical design of the [EsA] framework, so too is it necessary to move beyond 'ready-made' communities of interest within the more vernacular domain of management. If we follow the broad conceptual logic of an EsA, the implication must be that parameters of evidence and practical 'know-how' should be significantly extended and redrawn . . . as the meaning of 'environmental' resources is recast under an EsA there is a need to think more creatively about 'who's in and why.' Who, for instance, are the people who can tell those with power and responsibility in environmental decision making about the value of ecosystem services to mental health, or to young people's sense of self-esteem in their communities, or to spiritual renewal, aesthetic value and cognitive development? We might say mental health workers, youth officers, faith-based groups, landscape architects, artists and environmental psychologists." (p. 375)*

Ostrom (2012) seems to extend this line of thinking further outward with her call for an adaptive multi-level governance approach that not only gives "substantial voice" to stakeholders, but also embraces institutional diversity.

Of course, affording citizenries an active voice in the design process places at centre stage the issue of how social preferences and goals come to be defined (and continuously re-defined). Costanza (2000), as an early 'instigator' in championing the ecosystem services paradigm, offers a thought-provoking view of how social goals might be better incorporated into the ecosystem services paradigm on the basis of efficiency, fairness, and sustainability. He presents a typology of sorts that envisions *homo economicus* (the progenitor of efficiency), alongside *homo communicus* and *homo naturalis* (the progenitors of fairness and sustainability respectively). Such a framing suggests a more holistic and inclusive approach to considering social preferences and assessing trade-offs (something ecosystem services critics would undoubtedly welcome). Certainly traces of an emerging thread in the literature are based on this very premise: that more inclusive, collaborative, and deliberative processes are essential if we are to ensure that societal values and preferences relating to ecosystem services are meaningfully incorporated in environmental policy (Daily et al. 2009; Farber et al. 2002; Costanza 2000).

2.4.7 Mode of Delivery (Heuristic Analytical Field 7)

As evidenced in the scholarly literature, the mode of delivery embraced in ES programs varies widely. Table 2.1 highlights some of this richness. In the program of payments for bird habitat and watershed protection in Bolivia's Los Negros Valley landowners agree to enrol forest plots (negotiated annually) that serve as 'conservation parcels,' while the Forest Certification Program of the Eastern Ontario Model Forest requires landowners to develop a forest management plan that adheres strictly to principles and standards adopted by the Forest Stewardship Council of Canada. EcoTender adopts a bidding (auction) process in which landowners competitively tender for contracts to deliver multiple ecosystem services. The EFP program, meanwhile, engages farmers in a process of self-assessment of environmental performance on the farm through a series of interactive workshops and the subsequent development of a farm plan (subject to peer review) that identifies stewardship actions to be undertaken.

The mode of delivery in the latter two approaches offers an interesting contrast to ponder in contemplating an ES architecture. How might a competitive bidding process incent or dis-incent

landowners in ways different to a process of self-assessment? Some argue that the concept of competitively bidding in the context of ecosystem service provision may be foreign to landowners (see Rolfe et al. 2009). In the absence of well-established price signals for ecosystem services (in contradistinction from those that exist for goods and services more familiar to us, such as the cost of a bushel of apples or a physiotherapy treatment), landowners may initially struggle to develop a tender. Moreover, the question arises: tendering for what *services*? Does this language of 'services' resonate with landowners, and are they able to frame a tender in an ecologically-relevant way? The answer to these questions could depend heavily on the nature of the 'support systems' in place. Is the tender developed in isolation by the landowner or guided with the help of an extension or field staff member? In the case of EcoTender, field support does appear to be an integral part of the program (State of Victoria Department of Sustainability and Environment, 2008), perhaps minimizing some of these potential stumbling blocks. Doubtless, the question of what support systems are in place for participating landowners has broad relevance in designing any ES program.

The approach of the EFP, meanwhile, offers a distinctively interactive and social setting. Farmers attend a facilitated workshop as part of the self-assessment exercise aimed at considering ways in which environmental performance on the farm could be improved. It might be argued that this mode of delivery affords a setting conducive to 'social learning.' Central to most definitions of social learning is the notion that individual and social learning processes occur through meaningful involvement, and that systems of participation create a 'platform for learning' (Sinclair et al. 2008). Consistent with this definition, the EFP workshop setting offers a learning environment in which an individual's perceptions and beliefs about stewardship can be shaped through a process of reflection and critical engagement. Such is certainly credited by EFP administrators as one of the notable merits of the program (A. Ross, Ontario Soil and Crop Improvement Association, personal communication, 2012). While processes of social learning might be expected in an interactive, non-threatening setting, such as the EFP workshops, intuition would suggest that an auction (inherently principled on competing with and outbidding others) is less likely to be generative of such processes of reflection and critical engagement.

A further consideration of relevance revolves around the question of whether the mode of delivery embraces the knowledge and expertise of landowners. This harkens back to an earlier reference to the notion of 'relations of regard,' built on the fundamental principles of reciprocity and reflexivity. Private landowners, given the opportunity to share their experiences and observations from a vantage point of a 'closeness to the land' (of 'lived experience'), may well

have a great deal of knowledge and wisdom to impart with program delivery personnel. [There is a rich, though arguably less appreciated, body of literature that provides evidence supportive of the idea that culturally-diverse ways of knowing enrich our understanding of the world and may serve to bring about more empowering outcomes. Ransom and Ettenger (2001), for instance, offer an enlightening look at how positive and empowering relationships have come to fruition based on traditional Haudenosaunee (Iroquois) institutions and philosophies of environmental cooperation.] Engendering the sharing of such knowledge surely represents a laudable goal, and one that might be expected to pay dividends in fostering the building of relationships conducive to the provisioning of ecosystem services by landowners. Reflecting for a moment on the body of scholarly literature on competitive auctions, there is almost ubiquitous reference to the challenge of information assymetries, where it may be in the landowner's self-interest to withhold certain types of information from the delivery agent or principal (for instance, about the true nature and number of species at risk on his or her property). How might such impinge on the sought-after ecological outcomes? And, furthermore, what of the prospects for garnering trust, respect, and reciprocity? What this highlights is the merit in considering how an ES program might serve to cultivate and nurture relations of regard, and, likewise, how an inattentiveness to such concerns could undermine program performance or viability.

While departing somewhat from the essence of discussion thus far (the heart of which has focused on contemplations of reflexivity, reciprocity and respect), the mode of delivery adopted might also be expected to influence landowner participation from the more 'technocratic' point of view of the complexity of the process. As evidenced in the literature on the adoption of conservation practices, matters of simplicity and complexity can have a significant bearing on adoption or uptake. Such concerns are framed later in the context of the nature of landowner commitments and obligations.

2.4.8 Form of Landowner Support / Incentive / Recognition (Heuristic Analytical Field 8)

Even a cursory scan of the scholarly literature begins to illuminate the wide range of forms of support/incentive/recognition that exist and that might be considered in developing an ES architecture. These run the gamut of monetary forms of support (which may take the shape of annual, one-time, conditional payments, tax breaks, or market-based rewards, for instance), cost-share arrangements, technical guidance or assistance, hands-on training, information sharing, in-kind payments, and forms of recognition as unassuming as an acknowledgement in the form of a sign, certificate or plaque, among others. ALUS, EcoTender, Environmental Stewardship, and

the PSA program are principled upon monetary payments. The Environmental Farm Plan program is illustrative of a cost-share arrangement, in which the farmer shares in the cost of environmental improvements undertaken on the farm. The EOMF Forest Certification Program adopts elements of technical assistance, information sharing and networking, and the use of partner signs and certificates as a means of recognizing the stewardship efforts of participants (in addition to its focus on enhanced market-based recognition for landowners committed to the principles and standards of responsible forest management upheld by the Forest Stewardship Council of Canada). The program of payments for bird habitat and watershed protection in Bolivia's Los Negros Valley, meanwhile, is innovative in its employ of *in-kind* payments. In-kind payments to landowners take the form of beehives and apicultural training (and since expanded to include barbed wire and fruit trees).

Scholarly debate has been particularly fervid in its grappling with payment as a form of landowner support or recognition. While payments have been adopted in some ES programs (as in some of the aforementioned examples), their embrace has awakened a critical eye on various grounds, not least of which concerns the nature of stewardship motivations and prospects for enduring change. Leopold (1949) provides an elegant and thought-provoking jumping off point in the context of this heuristic with respect to motivations for stewardship:

> *"The fallacy the economic determinists have tied around our collective neck, and which we now need to cast off, is the belief that economics determines all land use . . . An innumerable host of actions and attitudes is determined by the land-users tastes and predilections rather than by his purse." (p.263)*

While it would be naïve to suggest that financial motives are inconsequential, others have echoed the refrain that motivations for engaging in stewardship transcend purely financial ones (e.g., Vanclay 2004; Roberston 2007; Stevens et al. 2002). Such brings into sharp focus the importance of considering the range of motivations that inspire stewardship in framing an ES architecture. An archetype built strictly on monetary payments may overlook more 'organic' or intrinsically-motivated avenues for garnering the provisioning of ecosystem services. Might a focus on monetary payments also stifle more novel ways of recognizing landowners for the role they play in protecting public goods? Imagine a scenario in which, in lieu of payments, a landowner might be afforded enhanced access to particular social services. Or, a variation on the Los Negros Valley example in Bolivia in which an innovative in-kind payment might be conceived (to harken back to an earlier discussion, what about reviving waning extension services?).

On the matter of endurance of change, the inevitable question arises: If payments dry up, will private landowners remain committed to environmental improvements? Dwyer et al (1993) cut to the heart of the matter:

> *"Even the most effective technique for the initiation of behaviour change is of minimal importance unless that behaviour can be maintained or if the intervention can remain in place for a long period of time." (p. 316)*

As Dobbs and Pretty (2008) observe, there is no guarantee that ecosystem services protected or enhanced under an ES program will be maintained beyond the life of the landowner's contract. What does this intimate for fostering a stewardship ethic or producing enduring change? Engel et al. (2008) charge that such thinking is irrelevant under an ES paradigm:

> *" . . . the basic logic of PES [Payments for Environmental Services] of compensating providers for the externalities they generate means it is not very useful to talk of permanence 'after payments end' – there cannot be any expectation of permanence in the absence of payments." (p. 671)*

Surely from a 'land ethic' point of view Leopold and others would find this disheartening in some measure. Moreover, as suggested by Cashore (2002), it would seem that the either/or proposition (payment equated with care, and non-payment equated with neglect) again disregards a more intricate interplay of motivations that incite stewardship actions.

Elmendorf (2003) brings another intriguing dimension of stewardship motivations into view with his assertion that "rational self-interest is not always the dominant motive force in social dilemmas." Such is borne out, for instance, in a study by Chouinard et al. (2008) who find that some farmers may be willing to make uncompensated sacrifice in support of broader social goals. This seems to bear resonance for Sheeder and Lynne (2011), who offer a compelling exposé of empathy-conditioned conservation. They make the case that 'walking in the shoes of others' "tempers and conditions" the role of financial aspects in conservation decision making, and that farmers exhibit shared 'other-interest' rooted in empathy-sympathy. In other words, profit-maximizing behaviour driven by self-interest tells only an incomplete story; evidence shows that farmers also make choices based on empathy and commitment to others. They charge that conservation policies and programs need to be designed to "nudge farmers into new habits that reflect an empathy-sympathy-based evolution of a shared common cause." What does this suggest for the development of an ES architecture? Perhaps above all, that it demands an attentiveness to empathy-sympathy conditioned responses as well as those that may find purchase

in more self-interested footings. Equally insightful to the development of an ES architecture is their submission that we would do well to reflect on how synergies between conservation payments and expressions of empathy/sympathy might be enhanced.

While their treatment here is necessarily constrained to mere mention, a number of other issues in relation to this heuristic would seem to merit further contemplation in designing an ES architecture, among these: (i) the role that payments may play in inducing the phenomenon of 'crowding out' of voluntary stewardship actions (see Frey and Oberholzer-Gee 1997; van Noordwijk et al. 2012; Vatn 2010); (ii) how the form of support in question may engender confidence (or non-confidence) among prospective participants from the perspective of its likely accessibility in the long-term (the more ephemeral or unstable, the more it may dampen enthusiasm to sign on); and, (iii) whether forms of support are conceived as temporary or transitional measures (or perhaps even measures in perpetuity). With respect to the latter, Salzman (2005) issues a cautionary note about 'path dependence,' whereby setting about down a path of payments may rule out a later transition to more prescriptive measures.

While the discussion of this analytical field has focused rather heavily and critically on payment as a form of support or recognition, it is in no way intended to discredit payment as a viable form of support (payment may be a preferred and effective policy option under certain conditions, as intimated by Kemkes et al. 2010). Rather, the hope is that it has helped to lay bare the intricate and perhaps delicate nature of striking a balance between inspiring a sense of responsibility unto the land and paying for ecosystem services rendered – and *form of support or recognition* raises some thought-provoking issues in this regard, with potentially significant implications for ES program viability and performance.

2.4.9 Nature of Landowner Commitment / Obligations (Heuristic Analytical Field 9)

In designing an ES architecture, one might expect the nature of landowner commitments or obligations to play a defining role, perhaps particularly so in the context of influencing likely landowner acceptability and buy-in. Just what is the landowner committing to? What is the depth and breadth of the contractual stipulations? How exacting or demanding are the commitments or obligations? Are they tenable? The answers to these questions could shape, in significant ways, the viability or performance of an ES architecture.

Consider for a moment the question of how demanding, involved, or onerous the commitments or obligations under a given ES governance architecture may be (or be *perceived* to

be). In reflecting on those programs highlighted in Table 2.1, one can begin to imagine how they might be more demanding by degree. Whereas the Entry Level tier of Environmental Stewardship entails the development of a simple farm environmental record (in effect a rudimentary accounting of farm environmental features), the Higher Level tier requires of farmers both a farm environmental record and a detailed management plan setting out stewardship goals and objectives. It might be argued that the EOMF Forest Certification Program represents a further step along this same continuum, requiring a detailed management plan and a commitment by the participating landowner to adhere, under contractual arrangement, to a set of rigorous principles and standards set out by the Forest Stewardship Council of Canada, and furthermore, to undergo periodic third-partying auditing. Intuition might suggest diminishing returns in program uptake as a program becomes more demanding or involved. Or, couched in terms of the complexity of the obligations, one might expect a negative association: lesser uptake in instances of greater complexity. Upon pause, however, such might be tempered by considerations of the nature of assistance available to landowners (to 'slog through' what might be administratively or technically overwhelming).

The nature of commitments or obligations might also be framed in terms of cost to the landowner. For instance, there is a nominal fee ($75/year) for private landowners to participate in the EOMF's Forest Certification Program to help offset audit and administrative costs. Might this serve as a deterrent to participation, or is the value provided deemed to outweigh the cost? Program administrators note that the 'group certification' structure makes certification achievable from the point of view of cost, particularly those costs associated with yearly and five-year audits (what would, if pursued on an individual landowner-by-landowner basis, be cost-prohibitive). Likewise, administrators point to the value ascribed by participants relative to technical assistance and guidance provided, access to practical information and hands-on training, as well as networking opportunities afforded them (S.Davis, EOMF, personal communication, 2014). One could imagine that the question of cost, in this example, could equally elicit a decision on the part of a landowner to refrain from participating. In light of this it would seem that a finely-tuned scoping of landowner needs, desires and expectations might serve as a valuable 'early design' exercise. Elsewhere in the scholarship, costs relative to *environmental improvements* are explored, with evidence of such costs (not only investments of hard cash but also investments of time) serving as a constraint to program participation (as in the case of the Environmental Farm Plan program, for instance; see Holmes 1998).

The temporal scale over which a program operates and/or its contractual obligations remain in effect is relevant to this analytical field as well. Are landowners required to make commitments over short or long-term time horizons? Do the commitments made by a given landowner bind the next owner to the same (as in the case of contracts on title)? One could imagine that making longer-term commitments (including those on title) might require a bit of a leap of faith on the part of the landowner. Will the program continue to exist and reward participants for ecosystem services over the long-term? What of natural disasters, and other unforeseeable circumstances that might put at risk the landowner's ability to deliver on commitments made over long time horizons? Such might require specific safeguards to be incorporated in an ES architecture in order to imbue confidence among participating landowners that insurances are in place to protect them in cases where failing to meet long-term commitments is, for all intents and purposes, outside of their control. EcoTender, by way of example, is innovative in adopting a structure that accommodates 5-year contracts as well as contracts in perpetuity. Such flexibility might arguably cater to a broader complement of participants. By extension it seems that a question meriting further scholarly reflection is that of how we might gently nudge or induce a shift along the participation continuum, in the direction of occasioning the embrace of long-term, enduring commitments – as inherent in Leopold's land ethic.

The concept of 'reciprocal obligation' brings a further dimension of interest to this heuristic. The discussion thus far has focused principally on the nature of obligations for landowners (aptly so given the descriptor for the heuristic at hand), but it would seem axiomatic that a reciprocity in obligations be a precondition to a viable ES architecture. The landowner must make a commitment to uphold an agreed-upon set of conditions, but what of the obligations of the delivery agent or organization? One might expect a reciprocity in obligations to engender a certain goodwill, trust and mutual respect among landowners and delivery agents. Elmendorf (2003) brings this proposition to life in his envisagement of a charitable trust conceived in the context of addressing tensions in the U.S. mid-west between the environmental community and the ranching community over the endangered prairie dog:

> *"Buy up a few ranches that feature a mix of vibrant dog towns and dog-free pastures. Transfer these to a charitable trust whose articles of incorporation mandate a board of directors composed of environmentalists, ranchers, agricultural extension agents and FWS [Fish and Wildlife Service] personnel. In a gesture of equal partnership and mutual acceptance, split the income from the trust between a social institution special to the ranchers, like the local rodeo, the 4-H program, or community school, and fund for voluntary habitat improvement projects . . . Impose two conditions on grazier lessees: first, that they own ranch property within the jurisdiction, and, second, that they join in the design, administration and publicizing of an ongoing monitoring project (on gift*

lands) regarding the impact of prairie dogs on livestock weight gain, health, forage utilization, and the like. The trust, then, serves both as gift and avenue to new experiential knowledge." (p. 471)

As Elmendorf's exemplification implies, finding creative ways of embracing a reciprocity in obligations and responsibilities could do much to deepen the relationship-building and sense of authorship and ownership so seemingly critical to the design and successful performance of any ES governance architecture. Further, it emphasizes that we need to be imaginative in exploring avenues that afford landowners the opportunity to give voice or expression to the formulation of those obligations and responsibilities that ultimately define some binding arrangement for the provisioning of ecosystem services. Parenthetical to this discussion, it is noteworthy that this sensibility to reciprocal obligations emerged compellingly in the context of focus group discussions with landowners that were undertaken as a complementary part of the research effort at hand.

Before leaving this analytical field, one further issue warrants reflection. Gutman (2007), and others, advocate that a new social compact is requisite if landowners are to take on the role of provider or protector of public goods. Such a compact would implicate not only landowners (as providers of ecosystem services) but all members of civil society (as beneficiaries of ecosystem services). Doubtless the realization of such a compact will demand greater investments by civil society actors, referring particularly here to the non-landowner faction. The question then arises: With greater investments by such actors, will greater expectations be thrust upon private landowners? And, moreover, will such actors have a more powerful say (as purchasers of ecosystem services) in prescribing decisions on the farm or in the woodlot? Cocklin et al. (2006), in eliciting farmer views on the institutionalization of an ecosystem services approach, document fears of losing control of land use decisions and appropriation of property rights as being concerns. Similar such findings highlighting fears of *government intervention* have been found in the context of stewardship schemes such as the Environmental Farm Plan program (see Smithers and Furman 2003; Holmes 1998). Landowners may become equally leery of possible 'interventions' by *civil society more broadly* under an ecosystem services paradigm – what might be perceived as yet another layer of 'being told what to do.' Given the firm and seemingly intensifying grip of the landowner rights movement in southern Ontario, a reverberation of such sentiments in the landowner community is certainly conceivable.

2.4.10 Nature of Monitoring / Auditing / Verification of Outcomes (Heuristic Analytical Field 10)

This analytical field brings into sharp focus the matter of how effectively an ES architecture delivers upon the fundamental promise of enhancing the provisioning of socially-desired ecosystem services (howsoever they come to be defined; and, as proffered earlier, such is not an uncomplicated process). Pearce (2004) in a thoughtful piece examining environmental market creation as 'saviour or oversell?' charges that "serious questions remain" with respect to "the extent to which initiatives secure improvements relative to the baseline of business as usual." A similar sentiment is echoed in *The Greening of Canadian Agriculture* (Schmidt et al. 2012) in relation to the rather embryonic ES efforts to date in the Canadian experience: "Measurability of the effects of EG&S programs is imperfect." But surely such measurability is vital under an ecosystem services paradigm in which civil society actors are called upon, at least notionally, to make weightier investments as benefactors of ecosystem services. The verification of ecological outcomes would seem critical from the point of view of substantiating (and securing) stewardship and conservation investments. Such is endorsed by Hajkowicz and Collins (2009), who make an appeal for effective metrics to measure the benefits of stewardship – for them, a prerequisite for improving stakeholder acceptance and investor confidence. Likewise, in their imagining of a 'conservation industry' for sustaining natural capital and ES in agricultural landscapes, Yang et al. (2010) point to the imperative of instituting conservation accounting and auditing systems that offer an "accurate quantification of the benefits of conservation." The emergence of increasingly sophisticated integrated modeling tools for assessing conservation outcomes may offer a promising way forward in this regard (e.g., see Oginskyy and Yang 2014).

Still casting attention to the scholarly literature, a rich dialogue has emerged that sets in distinct contrast performance-based monitoring and that based on land management practices or proxies. Zabel and Roe (2009) make the point that there are few well-established ES schemes based on performance payments. Much more common are those that feature payment or rewards based on changes in land management practices or related proxies (as echoed in Jack et al. 2008). A quick glimpse at Table 2.1 bears out a like conclusion. The Bolivian program of payments for bird habitat and watershed services relies on compliance monitoring based on land use. The PSA program in Costa Rica, which, despite serving as the 'poster child' of sorts for PES programs worldwide, has been noted as being admittedly weak in monitoring the effectiveness in generating the desired ecosystem services (Pagiola 2008), with a focus on changes in land use practices not ecological outcomes per se. Payments in the case of Environmental Stewardship are

ostensibly action-based not outcome-based. ALUS and the Environmental Farm Plan program are analogous in setting their spotlight principally on the adoption of best management practices. In all of these cases it stands to reason that the approach taken is not out of a blithe disregard for the importance of performance- or outcome-based measures, or, put in another way, palpable enhancements in ecological terms. Rather, the pursuit of such ends may be constrained by issues of cost and complexity. In the final analysis, this may issue a significant challenge for the development of ES programs: how might a blueprint for an ES architecture address the pivotal need for outcome-based evidence against a backdrop of ecological complexity and finite resources?

One could imagine how issues of transparency might equally emerge in vivid fashion in the context of this heuristic field. Consider for a moment the finer point of how issues of transparency might manifest in relation to the auditing or verification of outcomes. What do such processes entail and how are they conducted? By whom? With what rigour? It might be argued that a program subject to independent, third-party audit (such as the EOMF Forest Certification Program) might be more rigorous in assessing outcomes than those not subject to such scrutiny. Such might represent a double-edged sword to the extent that an audit or verification process may be seen as threatening in some measure (e.g., what might manifest in fears of disclosure of information), serving as a deterrent to participation. [Adding what might be further fodder for scholarly debate in this vein, Tiesl et al. (1999) cast doubt on whether eco-certification represents a "field of dreams," arguing that claims can be vague, even misleading in some circumstances.] To juxtapose, the Environmental Farm Plan program is based on a process of self-assessment and peer-to-peer review. While extolled on the merits of its bottom-up dimension, some have called into question the possible privileging of farmer views, and worry that the approach may limit transparency. What seems evident in all of this is that the pursuit of greater rigour and transparency in assessing outcomes may need to be sympathetic to how it may serve to encourage or disenfranchise the community of landowners upon whom good stewardship, in large measure, rests.

Finally, there remains the knotty issue of disentangling the effects of a particular program in question from that of other programs or policy measures at play. Discovering causality might be argued to be nevermore intricate than in questions surrounding complex, dynamic ecosystems. In this regard, we might take a cue from Kenward et al. (2011) in their Holling-esque embrace of adaptive management – such that acknowledges the deeply intertwined nature of complex, ever-evolving socio-ecological systems, and, that welcomes us (indeed urges us) to engage in an

enduring process of enlightened (re)discovery.

2.5 Conclusion

The heuristic framework elaborated here has served to illuminate some of the tensions and issues that demand a critical (and perhaps empathetic) eye in the design of ES governance alternatives. The framework makes an original contribution to the scholarship in drawing attention to a suite of heuristic analytical fields that can be contemplated in a systematic way in framing ES governance alternatives. And, while the contemplation of the various analytical fields has served, in some ways, to illuminate more questions than answers, it illustrates the breadth and depth of considerations that call for careful and measured reflection and probable negotiation – spanning many vantage points, from civil society actors that may be ES 'providers,' ES 'benefactors,' or even both simultaneously. As the reconnaissance or 'fly-over' in this study has revealed, the scholarship is vast in regard to issues and challenges in so far as developing ES recognition/remuneration approaches is concerned. The hope is that this framework offers a way forward (an early overture as the scholarship grows) to distill down some of this 'extensiveness,' a means of systematically exploring some of the particularly critical issues that may influence the viability or performance of ES governance alternatives. As in Holloway et al.'s embrace of the heuristic approach in contemplating alternative food networks, the framework presented here is not meant to be a "definitive and static representation." Rather, the hope is that the framework serves to spawn further scholarly enquiry that nurtures and evolves our understanding of institutional design as related to the provisioning of ES.

As ES governance alternatives continue to garner scholarly attention, the inescapable question arises: what are the prospects for transitioning the theoretical allure of the ES paradigm to grounded approach? In reflecting on the key essences contemplated and elaborated throughout the heuristic framework, several 'openings' seem to take shape that may serve as useful avenues for social scientists to explore as we seek out ways to further enhance the provisioning and protection of ecosystem services. Returning first to the notion of growing faith in the private market, it would seem that a greater sensibility to the wide-ranging motivations (and nuances therein) that incite or inspire the provisioning of ES is warranted. Further, as Elmendorf (2003) charges:

> *"Social psychology offers no algorithm for transforming attitudes deeply trenched in culture and experience." (p. 471)*

Indeed, it seems that the pursuit of such an algorithm can only serve as a fool's game given the heterogeneity of the landowner community. This is not to suggest that we let such heterogeneity disillusion or dishearten us as we endeavour to imagine, devise and deliver programs intended to foster the provisioning of ecosystem services. Rather, as in the framing by Vanclay (2004), it brings into focus the importance of understanding adoption not a discrete one-time affair, but rather a social process of reflexive contemplation and re-assessment. As such, participation in programs aimed at fostering the provisioning of ecosystem services must be understood as shaped by particular socio-cultural contexts (as intimated in the heuristic framework). Such requires us to be deeply introspective in our contemplations of possible ES governance alternatives. And, to take up the challenge presented by Sheeder and Lynne, we might stand to learn a great deal by 'walking in the shoes of others' as enlightened architect.

In re-engaging the issue of growing tensions between the private landowner community and civil society broadly, and imagining a way to move towards the new social compact advocated by Gutman, insights emerging from the body of scholarly work on alternative food networks may prove illuminative. Following Sage (2003), for instance, how might extending the concept of 'relations of regard' inform the design of ES governance alternatives? As inferred in the heuristic framework, a re-imagining and re-constituting of relationships such that they truly embrace the principles of reflexivity, reciprocity, and respect offers hope for a rapprochement of urban and rural actors. Fish (2011) offers additional fodder in issuing the challenge of elaborating further the relationship between ecosystem services and well-being. How might an appreciation of the relationship between ecosystem services and human well-being serve to kindle the realization of such a compact? In animating and inspiring thinking that connects the dots between healthy ecosystems and human well-being, social scientists should surely play a starring role.

As unveiled in the course of fleshing out the heuristic framework, the contemplation of ES governance alternatives deeply engages the matter of public and private, and intersections thereof. While the scholarly discourse at times evokes a certain disharmony or dissonance in framing public and private policy approaches to governing the environment, this seems to disregard a more nuanced dimension that is emerging, one in which the interplay of public and private may prove synergistic – casting off the dualistic 'shackling' that, argued here, may constrain innovative conceptualizations of ES governance alternatives (recall Cashore's illustration of state involvement lending a legitimacy to market-driven forest certification systems). A more open embrace of hybridity in institutional arrangements may offer a way forward as ES governance alternatives continue to be explored and conceived. And, as Clark et al. (2007) caution in the

context of governance writ large, we should be wary of the "one best way" reflex in institutional design, and consider thoughtfully the complementarities among approaches. Couched in more lyrical terms, the advancement of efforts to foster the provisioning of ecosystem services would seem to defy what Robert Frost's neighbour saw as the need for good fences in the *Mending Wall*. Safeguarding ecosystem services demands a transcending of those fences, both in a social and ecological sense. And, to that end, we each have a responsibility and a duty of care.

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CHAPTER THREE

Governance Mechanisms for Fostering and Recognizing the Provisioning of Ecosystem Services by Private Landowners: Views from the Land

3.1 Abstract

With the ostensibly growing foothold of the ecosystem services (ES) paradigm, the public good nature of environmental stewardship has been elevated in both policy and public consciousness. Considerable impetus behind the notion of remunerating for ES has come from a landowner community frustrated by intensifying societal demands to provide what is largely a public good, oftentimes at significant private expense. Such has led to escalating interest in both scholarly and conservation practitioner circles in the means by which we might acknowledge and animate support for the provisioning of ES. Set in a regional context (eastern Ontario), the research explores the governance mechanisms by which private landowners – as actors who play a defining role in conservation outcomes across the landscape – might be recognized and rewarded as providers of ES. The appeal and viability of a suite of ES governance mechanisms is explored from the point of view of private landowners, offering experiential 'views from the land,' as well as program delivery and policy development professionals.

While the findings defy an uncomplicated elaboration of the 'perfect' governance model, there was discernable convergence towards some consistently appealing governance features, among these: arrangements founded upon the principles of respect, trust, understanding and reciprocity; approaches with grassroots orientations, and featuring collaboration and cooperation; flexibility in program design and delivery; and, accessibility to technical/field support commensurate with program complexity. Provocative is the finding that the intrinsic-extrinsic binary that is commonly invoked in scholarly discourse in relation to motivations for conservation may oversimplify explanations for adoption/participation behaviours, disregarding important nuances. Equally compelling is the finding that approaches that foster a strong sense of 'authorship' over and 'investedness' in project design and outcomes could enhance the prospects for bringing about enduring change. Finally, a 'rediscovery of the rural' was viewed as a precondition in garnering widespread civil society support for the provisioning of ES. This suggests that we are likely to grapple in fostering the provisioning of ecosystem services if governance narratives do not embrace the notion of a shared responsibility for their provisioning.

3.2 Introduction

> *"That we now live in an economy that is not sustainable is not the fault of only a few mongers of power and heavy equipment. We are all implicated. We all, in the course of our daily economic life consent to it, whether or not we approve of it. This is because of the increasing abstraction and unconsciousness of our connection to our economic sources in the land, the land-communities, and the land use economies." (Wendell Berry, 2012, p. 20)*

The protection and enhancement of environmental amenities and qualities on private land under agriculture and forestry has long been fraught with difficulty. On such 'working landscapes,' questions surrounding responsibilities unto the land, the sanctity of private property, and balancing utilitarian and environmental protection goals have proved among the thorniest. In a fundamental reconceptualization of society-nature relations (e.g., see Liverman 2004), the past decade has witnessed a burgeoning interest within both scholarly and applied realms in the re-casting of environmental amenities and qualities as commodities or 'services' for trade, marketable and saleable in much the same way as a loaf of bread or a quart of strawberries. With the ostensibly growing foothold of the 'ecosystem services' (ES) paradigm, the public good nature of environmental stewardship has been thrust into the limelight, marking a significant shift in policy circles (Dobbs and Pretty 2004; Pierce 1996). The newly-emergent perspective under the public good lens holds thus: given that individual landowners or 'stewards' are expected to bear the responsibility of meeting heightened standards of environmental protection through additional expenditures or foregone development opportunities, and yet society at large reaps the environmental benefits, these landowners should be remunerated by society (e.g., Nathan and Kelkar 2001). Considerable impetus behind the notion of remunerating for ecosystem services has come from a landowner community frustrated by intensifying societal demands to provide what is largely a public good, oftentimes at significant private expense. This frustration is evident, for instance, in the policy position adopted by the Canadian Association of Forest Owners (CAFO):

> *"Unfortunately, the penalty, and burden of regulation, falls upon private owners who continue to maintain their land as forest, and in doing so provide a range of public benefits." (CAFO, 2012)*

A 2010 commentary by the Christian Farmers Federation of Ontario (CFFO) echoes the same argument, embracing ecosystem services payments as a means of moving beyond "random acts of stewardship" (CFFO, 2010). These, and like commentaries, have spawned a growing interest within the policy and conservation practitioner community in exploring the governance

mechanisms by which private landowners might be recognized and rewarded as providers of ecosystem services – inspiring and serving as a springboard of sorts for the research at hand.

While nevertheless alluring in its metaphorical simplicity, the ES paradigm and associated notions of valuation, monetisation, commodification and remuneration have raised some provocative issues on philosophical and ideological grounds among scholars working in the field of rural environmental governance and equally among conservation practitioners. The notion of assigning a monetary value to nature and its 'services,' as was famously done by Robert Costanza and colleagues (1997) in *Nature*, is ethically objectionable for many (e.g., Sagoff 2002); indeed, in direct response to Costanza et al. (1997), Norgaard and Bode (1998) ponder, somewhat facetiously, "Next, the value of God?" In a like vein, Monbiot (2014) wryly suggests that, with a price for love and a true value for society, we could produce a single figure for the meaning of life. He casts a scathing light on the neoliberal doctrine under which the 'Natural Capital Agenda' has emerged, resolute in the view that it is "effectively pushing the natural world even further into the [capitalist] system that is eating it alive (p.4)." Elsewhere, as suggested by other scholars, a grey area emerges surrounding 'duty of care' issues. How does one discern between a duty of care and an act for which one ought to be remunerated? If environmental stewardship can be shown to be grounded in ethical terms with strong underpinnings couched in the language (and exercised in the practice) of responsibility, can one justify remunerating or compensating landowners? Is 'good' stewardship an ethical imperative? Or, is the ideal solution one that strikes a balance between the two extremes, as suggested by Worrell and Appleby (2000, p. 274):

> *"On the one hand, stewardship might suggest that provision of some types of public benefit is a requirement of good stewardship and should not lead to demands for compensation. On the other hand it seems reasonable that society should be willing to contribute something in return for its greater stake in management."*

The concept of remunerating landowners for their provisioning of ecological services has likewise elicited anxieties about the dangers of motivational crowding (see Reeson and Tisdell 2008; Frey and Oberholzer-Gee 1997), introducing extrinsic incentives where individuals are already making intrinsically-motivated contributions. Moreover, what are the implications of such a shift in practice for the endurance of change in stewardship behaviours under an ES paradigm? In the crassest of terms, if the money dries up, do landowners remain committed to ecological enhancements?

Amidst this backdrop of philosophical and ideological frictions, there have been calls for a new social compact that embraces a more equitable sharing of the responsibilities, burdens and

risks associated with the provisioning of ecosystem services. For Gutman (2007), a notable champion in this regard, such a compact could engender a rapprochement of the urban-rural disconnect, and represent a way forward in fostering and enhancing the provisioning of ecosystem services on private lands. Others are more circumspect, fearing that the widening cast of actors that such a compact implies may inevitably lead to new contestations about the countryside (e.g., see Ferreyra et al. 2008), intensifying rather than dampening tensions between the private landowner community and civil society at large. That new actors may have a more powerful say (as *purchasers* of ecosystem services) in prescribing decisions on the farm (or in the woodlot) produces its own intriguing set of issues. Cocklin et al. (2006), in eliciting farmer views on the institutionalization of an ecosystem services approach, document fears of losing control of land and appropriation of property rights as being concerns. Similar such findings highlighting fears of government intervention have been found in the context of stewardship initiatives such as the Environmental Farm Plan program (Smithers and Furman 2003; Holmes 1998).

While the scholarship is increasingly rich in its examination and treatment of the many philosophical and ideological issues and challenges that beset the ES paradigm, (as contemplated in a complementary part of the research effort that develops a heuristic framework exploring ES governance alternatives), less scholarly attention has been devoted to exploring more explicitly the interests of those closest to the ground for different ES governance mechanisms or arrangements – the thousands of private landowners, who, for all intents and purposes in the research context at hand, play a defining role in shaping stewardship outcomes across the landscape. This paper is premised on the need for a fuller understanding of those governance design features or attributes that would serve to foster and enhance the provisioning of ecosystem services by private landowners. In equal measure, the paper responds in a more pragmatic vein to calls issuing from the conservation practitioner community and various landowner-based organizations (grassroots and otherwise) for exploring the mechanisms or arrangements by which a more equitable sharing of the costs and responsibilities of providing ES might be achieved.

In a most broad sense, this paper engages the issue of how private landowners might be better recognized or rewarded for their role in providing or safeguarding ES. The more specific aim of the paper is to assess the interests of private landowners, and program and policy professionals, for a range of ecosystem services governance mechanisms. The interests and appetite for different mechanisms is explored from the point of view of private landowners, as actors offering experiential 'views from the land,' and program delivery/policy development professionals, as an actor group bringing a depth of experience in fashioning, delivering, and

evaluating programs that seek to engage private landowners in environmental stewardship activities and efforts. The paper offers a 'nuts and bolts' assessment of a suite of ES (and ES-like) mechanisms and programs that were explored with both actor groups from the point of view of interest (i.e., appeal) and viability. What of the best of each of these mechanisms might we draw upon in enhancing the provisioning of ES by private landowners? Barriers and hurdles to instituting these various mechanisms are likewise considered. While the findings presented herein necessarily (and unabashedly) reflect the nuances of a distinct regional setting (eastern Ontario), it is intimated that they offer wider applicability and import for ES scholars and practitioners.

It is the author's hope that this paper not only enriches the scholarship on ES governance mechanisms, but deepens appreciations for the lived experience of private landowners, informing program and policy development in a substantive and empathetic way. Otherwise stated, that it might also serve to advance in some measure (however unassuming) Anthony Giddens' call in *The Third Way* (1998) for a politics that helps civic actors to navigate "the major revolutions of our time."

3.3 Research Approach and Methodology

The selection and presentation of a suite of ES exemplars was used to elicit discussion (of a very material nature) with the study participants. Focus groups were invoked as the principal form of interaction. The use of focus groups was deemed particularly fitting in this research context. Not only does the approach capture in-depth and nuanced information from participants (and their interactions), it also serves to generate respect and shared understanding among participants (see Kellogg et al. 2007; Kitzinger 2004; Wilkinson 1998) – thus presenting opportunities for innovative, collective problem solving. Further, the direct engagement of stakeholders in such 'collaborative research performances' (cf. Bosco and Herman, 2010) builds legitimacy for program development, a desired outcome closely aligned with the research aim.

Eight focus groups were convened with private landowners (n=75), covering a wide geography in eastern Ontario over the period from 2010 through 2012. The focus groups ranged in size from six to 14 participants. Participating landowners included woodlot owners, farmers, and, to a lesser extent, those with development interests. Land management interests and objectives were diverse (eclectic even), ranging from timber harvesting, aesthetic and recreational enjoyment, maple production, wildlife habitat enhancement, and food production (dairying and

cropping particularly). This diversity was sought out by design (through the researcher's extensive professional network of landowner and landowner organization contacts) with the intent and hopes of engaging a broad complement of landowners with potentially wide-ranging views on the subject at hand: mechanisms for fostering and recognizing the provisioning of ES by private rural landowners. Two of the focus groups might be considered 'special interest' groups – one consisting of landowners representing the landowner rights movement in eastern Ontario, and another consisting exclusively of certified woodlot owners enrolled in the Forest Certification Program of the Eastern Ontario Model Forest (EOMF).

In a separate but parallel dialogue, a focus group was convened with twelve local program delivery and policy professionals representing woodlot, farming and other stewardship interests. Agencies and organizations represented included: Conservation Authorities; Ducks Unlimited; the Eastern Ontario Model Forest; the Ontario Woodlot Association, the Ontario Ministry of Natural Resources (Ontario Stewardship Program); the Ontario Ministry of Agriculture, Food and Rural Affairs; the Ontario Soil and Crop Improvement Association; and, the United Counties of Leeds and Grenville. In the case of all the focus groups, an open-ended conversation about stewardship motivations, responsibilities for stewardship, and philosophical questions pertaining to ES preceded a facilitated discussion regarding an array of ES (and ES-like) recognition/remuneration mechanisms that have been instituted around the world, including those emerging on the Canadian stage, and their appeal (desirable features and attributes) in contemplating an ES recognition framework that might be developed in an eastern Ontario context. In a departure of sorts from more conventional focus groups that typically span two to three hours in duration, each of the focus groups in this study spanned an entire day (roughly seven to eight hours). Such afforded a tremendous depth of interaction with the study participants (for which the author is indebted).

The research also draws on insights stemming from in-depth interviews with eight key informants possessing ES expertise spanning regional, provincial, national and international policy contexts. Perspectives from these informants were sought out in the interest of developing a deeper appreciation for the current political climate and direction for ES programming and policy in Canada, and how such might bring to bear on the design of an ES governance framework in the local context.

Underscored by the author's embrace of a research ethos founded on respect, reflexivity and reciprocity, the research approach included a process of follow-up with participants to seek their reaction and feedback to the author's interpretation and synthesis of key viewpoints and ideas

shared in the course of the focus groups and in-depth discussions. Serving an important validation function, this process of follow-up created an opening for participants to challenge interpretations and share divergent experiences or alternative or nuanced views – stimulating reflexivity and deepening understandings, much in the spirit of respondent validation embraced by Turner and Coen (2008), transcending a simple 'blessing by participants' and rather seeking to uncover deeper significances and, in doing so, building more nuanced interpretations of the social phenomena under study. In the research at hand, the process of follow-up initially took the form of circulating an abridged summary of findings to participants by electronic means. In a somewhat unexpected (though much welcomed) turn of events, feedback was offered not only in return emails, but in subsequent phone conversations, and in several face-to-face conversations, including a formalized follow-up meeting at the request of participants from one of the original focus groups. The research findings presented in the pages that follow were enriched by virtue of this process of re-engagement.

An important caveat before turning to the elaboration of findings: it is accepted that the research is inherently shaped by the nature of the place in question – eastern Ontario. The geographical peculiarities in terms of ecology (e.g., the relatively high percentage of forest cover and intact ecosystems compared to certain other jurisdictions) and the economics of the region (e.g., characterized by a forest and rural sector in transition, some might even venture a "decline") are apt to shape the research findings in certain ways. The same is likely true with respect to the complex socio-cultural fabric of the area (e.g., traditional land uses of the indigenous Haudenosaunee and Algonquin peoples). It is also acknowledged that the population in the study is not representative in statistical terms. This is not to suggest that the research findings are of relevance to eastern Ontario only, quite the contrary. They are anticipated to have far-reaching utility elsewhere, recognizing that the interpretations are sensitive to, and, in part, a product of, the geographical context. In the final analysis, it is the explanations, understandings and interpretations of *why* the various ES recognition mechanisms were perceived in certain ways by the actors that lend illuminative power and robustness to the piece – insights that should prove helpful to scholars and practitioners contemplating the development of ES recognition frameworks in other parts of the world.

3.4 Parsing Ecosystem Services Recognition Mechanisms

The suite of eight ES recognition mechanisms/approaches explored in the course of the focus group discussions are treated in this section from the vantage point of assessing their appeal and viability as viewed by both key actor groups (i.e., the landowner participants and the program delivery/policy professionals). This exercise was not meant to serve as a comprehensive critique of the programs as such; rather, it was conducted in the spirit of reflecting upon and identifying desirable attributes and strengths, as deemed important in fostering and recognizing the provisioning of ES (and likewise, identifying those attributes that might be undesirable, or present as barriers). As a means of eliciting discussion and sussing out insights relative to the various mechanisms, participants were encouraged to reflect on three evaluative criteria: *acceptability* or likely degree of buy-in and support for the mechanism in question from a broad societal perspective; *feasibility of implementation* or deliverability of the mechanism in a practical sense; and, *effectiveness in generating ES*, referring very specially to assurances in terms of the tangible (demonstrable) delivery and/or protection of those ecosystem services identified as desirable by society under the mechanism in question. This proved a helpful way to compartmentalize things (in a malleable rather than rigid sense), and subsequently assess and report on prospects relative to the mechanisms being explored. The analysis that follows is thus systematically structured around an engagement with these three criteria in relation to each of the mechanisms.

While representing only a modest sample in terms of the breadth of emerging ES recognition mechanisms on the international (and domestic) stage, those explored here are illustrative of the pronounced diversity in approaches and were chosen in part on that basis. They showcase a richness of governance arrangements, spanning those administered and funded principally by government, through those under shared delivery models, and still others propelled by forces in the private marketplace. Each encompasses some element of recognizing private landowners for the provisioning of ES or, more accurately in some cases, the adoption of stewardship actions or measures (thus some are more accurately described as ES-like recognition mechanisms – i.e., while not premised on the provisioning of ES in a strict sense, they endorse stewardship efforts more generally, such as might, to varying degrees, result in the provisioning of more well-defined ES). Of note at this juncture, the notion of ‘recognition’ was defined in most inclusive terms in this study, and meant to capture the broad array of ways in which landowners might be recognized – running the gamut of something as understated as a handshake and being presented with a certificate of recognition at a community event, through recognition in the marketplace, through various other forms of rewards and remuneration spanning tax incentives, in-kind

payments and monetary payments. The mechanisms/programs at hand were also selected in part on the basis of having garnered some level of acceptance (e.g., as evidenced through political support or public investments), having enjoyed a certain level of uptake (in terms of landowner participation), and/or having elicited some notable interest within the landowner community and in policy and scholarly circles. Those explored include: the Managed Forest Tax Incentive Program (Ontario); the Environmental Farm Plan (EFP) program (Canada); Alternative Land Use Services or ALUS (Canada); the Forest Certification Program of the Eastern Ontario Model Forest (Canada); the Environmental Stewardship scheme (U.K.); EcoTender (Australia); a program of payments for bird habitat and watershed protection in the Los Negros Valley (Bolivia); and, the Pago por Servicios Ambientales (PSA) program (Costa Rica).

Returning briefly to an earlier point, while some of the mechanisms (particularly several in the domestic context) do not represent *ecosystem services* recognition mechanisms in a most strict sense, it was felt that certain of these programs – pre-cursors, if you will, to more nascent programs firmly embedded in ES 'culture' – held value in forming part of the suite of programs in the study from the perspective of not wanting to throw the proverbial baby out with bathwater. This mirrors a viewpoint captured among key messages in a report examining ES concepts and options for agri-environmental policy in the Canadian context: that there are "existing institutions, mechanisms and programs (e.g., environmental farm planning) that can be leveraged in implementing solutions" (Wilson, 2009). What lessons might a closer look at these (long-running) programs reveal or how might these programs be instructive in so far as fostering the provisioning of ES is concerned?

Thus, on to the treatment of each of the mechanisms in turn, focusing on their appeal and viability as expressed through the voices of those closest to the land, and those immersed in ES program and policy development. Implications for the development of a framework for recognizing and fostering the provisioning of ES in the local context are touched upon throughout the discussion, though reserved in large measure as the subject of deeper enquiry in Chapter 4.

3.4.1 Managed Forest Tax Incentive Program (MFTIP), Ontario, Canada

In the province of Ontario under the Managed Forest Tax Incentive Program (MFTIP) landowners receive a 75 per cent tax reduction on eligible forest lands (Ontario Ministry of Natural Resources, 2012). A minimum of 4 hectares is required to enter the program. Participation involves developing and adhering to a forest management plan (which must be

approved by a qualified forest plan approver). Plans are revisited at 10-year intervals, with a progress report required at the five-year mark. At the time the research was conducted, administrative responsibility for MFTIP was in the throes of shifting to the province, having long been administered jointly by two non-government entities on behalf of the province – a shift triggering considerable apprehension in the landowner community, a discussion to which I return momentarily.

MFTIP was widely praised by both landowners and program professionals from the point of view of "offering an awakening to one's property." The educational value afforded in the process of creating a management plan was viewed as a key strength of the program in the eyes of both landowners and program delivery professionals. In the words of one landowner participant, actions taken are strongly shaped by "an awareness that precedes the caring" – the process of developing a plan under MFTIP viewed as generative of that awareness (and that caring), and, furthermore, generative of positive stewardship outcomes. This is reminiscent of Wendell Berry, for whom 'it all turns on affection':

> *"The primary motive for good care and good use is always going to be affection, because affection involves us entirely." (2012, p. 33)*

The notion of affection as 'involving one entirely' raises a noteworthy issue that emerged in the course of the focus group discussions: that the level of engagement by the landowner in the plan development process itself may influence the sense of 'authorship' over it, and, in turn, the sense of 'ownership' (or feeling of being invested) in the associated stewardship efforts. As one landowner participant explained:

> *"I have two woodlots. The management plan for one of those woodlots was prepared by consultants. The development of the other plan I was involved in myself. I'm implicated in it. Somehow I feel more a part of it, invested in it. Something is lost in having plans done for you. Landowners need to be engaged [in that process]."*

In contemplating a framework for fostering and recognizing the provisioning of ES, this has interesting implications from the point of view of 'investedness' and, furthermore, prospects for enduring behavioural change.

From the point of view of its effectiveness in generating ecosystem services, there was agreement among program professionals that MFTIP falls short to the extent that, while provisions exist for periodic field visits, they are infrequently pursued as a result of resource

constraints. Further, as noted by a MFTIP program administrator, the program relies heavily on the managed forest approver in terms of ensuring that management plans meet appropriate touchstones; beyond that, an "honour system" is in effect, whereby the onus is on the landowner to uphold commitments set out in his or her plan (indeed, according to this same administrator, ground verification would happen only on a complaint basis – e.g., a neighbour lodging a complaint suggesting that a violation of a plan may be occurring). Interestingly, similar concerns about the infrequency of ground checks were echoed among some landowner participants. In the words of one long-time participant in MFTIP, "In twenty years no one has come to visit us or take a look at the woodlot." The patchy nature of check-ins with landowners (in the form of field visits and associated ground-truthing or verification efforts) leaves in question the extent to which plans are being followed and ecological outcomes achieved. At the same time, conversations among landowner participants suggest that a delicate balance may be required in the interest of not tipping the scale in the direction of "micromanaging" actions in the woodlot or on the farm. Prevalent among landowners was the sentiment that there is an unfounded lack of respect and trust that they will choose the 'right' or upstanding course of action, as exemplified in the following:

> *"That really gets under my craw because I have every intention of doing it right in the first place. But, the mere fact that I have to have somebody come and tell me that I 'cannot' or I have to go through another hoop . . . this is the dichotomy, this is the complexity of the situation."*

Another landowner couched his feelings about the fine line between accountability and running undue interference in the context of 'gentlemen's agreements' of the past – which, for him, subsumed an ethical code of conduct, a code of conduct that assured that "the job would get done." How might a rekindling of such arrangements coupled with a sensitivity to metrics be achieved in designing a framework for recognizing landowners? Such clearly warrants careful consideration.

Elsewhere, the "gentle" requirements of MFTIP were highlighted in relation to its effectiveness in generating ES:

> *". . . it seems a tad generous to assign a medium ranking to MFTIP's effectiveness in generating ES. The requirements are quite gentle now: 'just don't clearcut' seems to be the key rule. But, if you factor in the educational value of preparing a plan and then implementing it, then I guess it's closer to a medium than a low ranking."*

Paradoxically, while such 'gentle' requirements may work in some measure against the

effectiveness criterion, they may work in favour of the acceptability criterion, as suggested by the ubiquitous agreement among landowners and program delivery professionals that overly onerous requirements in programs (in a general sense) serve as a surefire kill-switch. In instances where requirements are less arduous, one might expect more favourable results in so far as program uptake is concerned.

Views on the degree to which MFTIP serves a valuable *recognition function* as such varied widely in that for some landowners participation offers a significant tax savings, whereas for others tax savings are minimal or not worth the investment of time and effort for the return back (depending on size of woodlot, and tax rates in the municipality in which a property is situated). For many landowners, the cost of hiring a consultant to help develop a management plan was viewed as a constraint. Likewise, the complexity of developing a plan was noted as a barrier for some. A noteworthy opportunity, to this end, was the suggestion by landowner participants that MFTIP could be improved with enhanced access to facilitators to help with plan development (and perhaps addressing the cost barrier equally, should access to such facilitators be provided in-kind – emulating, for instance, the approach in the Environmental Farm Plan, a program visited momentarily). Recalling the earlier point about landowners needing to be meaningfully engaged in the plan development process, access to facilitators could potentially enhance the learning (experiential) outcomes as well.

A further intriguing issue that emerged in the context of discussions about MFTIP was the impending transfer of the program to the Ontario Ministry of Natural Resources (now the Ontario Ministry of Natural Resources and Forestry), having been for many years administered jointly by the Ontario Woodlot Association (OWA) and the Ontario Forestry Association (OFA) on behalf of the province. [The impending transfer a fait accompli at the time of writing]. As "landowner-friendly" delivery organizations in the eyes of many landowners, the looming transfer of responsibility away from OWA and OFA was seen as worrisome:

> *"We used to have a nice working relationship with all the people. Now they're transferring the whole thing over. And I don't like that. The reason I don't like it? Let's put it this way, those people had a heart. The Ministry is very legalistic. It's rather too bad. It's bad news."*

As another landowner put it in relaying his experiences in trying to encourage neighbours to participate in MFTIP:

> *"[The transfer] is not helping with the task of persuading more people to join . . . Even the very smart, kindly people I know around here think I'm nuts to get involved with a*

> *government program like MFTIP. That's the legacy of heavy-handed, top-down policies in a number of fields, particularly environmental regulations. When I tell them that I get a tax break for just treating the woodlot the way I would treat it anyway, they shake their heads. They just don't trust the government, regardless of the party in power."*

Similar concerns were acknowledged by program actors. In the words of one program delivery agent:

> *"It's all about perception. The minute you bring in a regulatory body, you've lost the perception of neutrality."*

The empirical evidence gathered in the course of the research suggests that an ES recognition framework in which administrative responsibility and oversight resides with a government entity may face considerable resistance in so far as landowner buy-in is concerned. As such, adopting a more grassroots delivery may pay better dividends. As a postscript, according to a MFTIP program administrator, participation levels since the transfer have not declined (the fact that plan approvers, who are *not* government employees, remain the principal point of contact with landowners may be a significant mitigating factor); whether such is borne out over time remains to be seen. Regardless, the anxieties uncovered in this research suggest that the 'who' in the delivery equation calls for thoughtful contemplation.

As a final reflection on MFTIP, the fact that it is embedded in legislation under the Assessment Act was viewed as a noteworthy strength (articulated primarily among program and policy actors). Such 'rootedness' in legislation was seen to lend stability, and contrasted with programs founded on a more mutable policy basis. This is an idea that resurfaces in the context of Costa Rica's Pago por Servicios Ambientales (PSA) program. Both program and landowner participants were drawn to the idea of having a suite of ecosystem services enshrined in a legislative framework (in the Costa Rican case, under Forest Law 7575).

3.4.2 Environmental Farm Plan (EFP) Program, Ontario/Canada

The Environmental Farm Plan (EFP) program began as a pilot project in the early 1990s in the province of Ontario, and was later expanded nationally. Developed for farmers by farmers, the EFP is a voluntary education and awareness program that engages farmers in a self-assessment of farm environmental performance. Currently supported under Growing Forward 2, Canada's comprehensive federal/provincial/territorial agricultural framework, local

delivery of the EFP program in Ontario occurs through the Ontario Soil and Crop Improvement Association (OSCIA). Essentially, participation in the program entails two commitments on the part of the farmer: a commitment to attend a facilitated workshop designed to assist in the self-assessment of farm environmental risks (using a workbook tool), and a commitment to complete an action plan which sets out actions and timetables for addressing environmental concerns identified in the self-assessment exercise (OSCIA, 2015). Farm plans are peer-reviewed, and, once approved, can be used to access a range of cost-share programs that support on-farm environmental improvements (including the adoption of various best management practices or BMPs).

Perhaps most striking in the course of conversations about the EFP program was the strong convergence in views among landowners and program professionals with respect to the acceptability criterion, attributed in large measure to its grassroots leanings (bottom-up dimension), and local delivery by trusted and well-respected facilitators. The latter, in particular, was emphasized as having enhanced the program's credibility within the farming community over time, arguably helping to surmount growing pains in the EFP's early days, during which uptake was notably constrained by issues of trust and related fears of government intervention (Smithers and Furman 2003; Holmes 1998). The confidential nature of the EFP program, likewise, was viewed as lending high marks in terms of the program's appeal, as captured in elegant simplicity by a farmer:

"The beauty of the EFP is that it is voluntary, and it is confidential."

Yet, the confidentiality facet adopted in the program may represent a double-edged sword of sorts in that it may enhance acceptability from the point of view of farmers, but diminish it from the point of view of public transparency. Such was articulated among landowners and program professionals alike. Notably, among program professionals there was a prevailing feeling that the benefits – in terms of encouraging farmers to take actions on their own terms and without the "fear of legal reprisals" – might outweigh the harms. In much the same vein, given that the approach is fundamentally based on processes of self-assessment and peer-review, the possible privileging of farmer views may present as a concern. Such may be particularly beleaguering in the context of the provisioning of ecosystem services under a new social compact that embodies greater civil society actor responsibility in shoring up conservation efforts by private landowners. Under such a contract, transparency would seem a pre-requisite.

In distinctly unified chorus, landowners identified the issue of finite and insufficient funding as the single greatest flaw in the EFP program. Program professionals, likewise, noted that the program is recurrently over-subscribed and thus often inaccessible to the greater masses, supporting those few who are 'first out of the gates.' The frustration of one farmer (echoed in the voices of many others) was palpable:

> *"You wait all year, but the day it's announced, it's not an hour and the funding is gone."*

Despite frustrations with the EFP program being chronically "under-funded by government," when asked to comment on the nature of cost-share arrangements, the overall tone was favourable among landowners. As articulated by one landowner:

> *"I think the uptake indicates that the cost-share is at least in the right range."*

Notably, in the context of conservation programs more generally, the views of program professionals coalesced around the idea that in-kind contributions by landowners ought to be permissible and encouraged as part of the cost-share mix. The overarching feeling was that in-kind contributions are more readily achievable than a (potentially) sizeable outlay of cash for many landowners, and yet still generative of a sense of 'investedness' in the conservation project at hand. This is not to suggest that program professionals were dismissive or unsupportive of the idea of landowners making contributions in cash as a demonstration of their commitment, only that they felt strongly that the value of in-kind contributions not be overlooked (that embracing such contributions serves to remove a "potentially significant barrier" to landowner participation). And, while offered up somewhat facetiously, the following makes the point about commitment via in-kind contribution rather nicely:

> *"If you've built a fence for two or three weeks [to keep cattle out of the stream], you're sure as heck not ripping it out!"*

In probing further the issue of commitment, landowners and program professionals were asked to consider whether having a farm environmental plan (or forest management plan in the case of the forested landscape) as an 'entry point' or pre-requisite for accessing additional incentives or financial rewards was desirable. Views on this converged quite strongly around it being an equitable way of recognizing efforts, wherein a management (or action) plan represents an initial demonstration of commitment by the landowner, with subsequent rewards available for going 'above and beyond.' While seen to be "fair within its own workings" several participants across

focus groups made the comment that the EFP program inevitably excludes certain landowners, with specific reference to the rural, non-farming faction. An opportunity suggested in this regard was the idea of instituting an 'Environmental Rural Property Plan' designed to be more encompassing of rural properties.

Landowners and program professionals alike pointed to the educational value in developing a farm plan as a notable merit of the EFP program (mirroring sentiments expressed in relation to MFTIP vis-à-vis the learning outcomes associated with developing a forest management plan). More intriguing yet is the backdrop for social learning created by virtue of the facilitated workshop process, in which there is an opportunity for farmers to share experiences and learn from peers. As brought to life by an EFP facilitator in painting a workshop scene:

> *"I only had 10 in the group. I had some established generational farms. I had some large farms, I had some smaller farms. I had quite a cross-section. The value of education in that room was amazing. People listening to each other, and opening up in the non-threatening setting. They went out of there with more wheels turning up here [motioning the head]. Every one of them. They were in that information mindset. It is such a valuable tool . . . people learning from each other, not listening to me talk, but listening to each other and valuing the opinion the others bring."*

Wholehearted expressions of agreement among program professionals were registered in animated nods and exclamations of "Absolutely!" Interestingly, and perhaps somewhat worrisomely, the process of follow-up with research participants brought to light the more recent move toward the online administration of programs overseen by the OSCIA. The effect of removing "the one-on-one relationship with farmers" was explicitly identified as troubling by one program professional (with the empirical evidence gathered in the course of the original research suggesting an overwhelming and pervasive concern about the move away from 'warm bodies' in the delivery of stewardship programs more generally).

As for its effectiveness in generating ecosystem services, appraisals, on the whole, might be best described as lukewarm. While some felt that there was evidence of important behaviour and practice change under the EFP (including several policy informants), others were more reserved, suggesting that woodlot and ES-related modules were less commonly a priority in the development of action plans (and improvement projects more focused on areas of core farm business and infrastructure). As with MFTIP, some cast doubt on the extent and robustness of efforts to ground-check or assess ecological outcomes following plan implementation. And, as noted by one program professional, there is no mandated requirement for a farmer to revisit an action plan at a future time given the program's voluntary nature. In a more positive vein, several

pointed to the ongoing evaluation of BMPs from a scientific perspective as a notable strength. As articulated by one participant:

> *"There has been a good deal of science supporting the efficacy of approved BMPs under the EFP process. The gap is perhaps at the audit stage, but many of the tools to generate environmental benefits are based in science and evaluated on an ongoing basis."*

It seems an opportunity presents for the EFP program in better articulating and demonstrating the effectiveness of these science-based BMPs. And, returning to an earlier point, such would seem of the essence if the hope is to secure additional public and political support for the provisioning of ecosystem services.

3.4.3 Alternative Land Use Services (ALUS), Norfolk County Program, Ontario

ALUS is a farmer-driven, fee-for-service approach that offers farmers annual payments for the provisioning and enhancement of ES (ALUS, 2015). Payments are based on average land rental rates, and support activities ranging from the restoration of wetlands, the establishment of riparian buffers and pollinator strips, the re-establishment of native grassland species, and the retirement of ecologically sensitive areas. Pilot projects have been undertaken in the Regional Municipality of Blanshard in Manitoba and in Norfolk County in Ontario, and, a full-scale provincial program has been instated in Prince Edward Island. At the time of writing, several additional ALUS pilots are in their infancy, notably the Ontario East ALUS pilot (situated in the study area), which was only in a conceptual stage at the time the research was undertaken.

While discussion among landowners revealed that payment undeniably serves as an attractive enticement for some, the allure of ALUS was tempered by an appreciation for the pragmatic limitations of implementing such an approach over a wide geography. And despite praises sung for the 'heroic' efforts of ALUS Norfolk proponents in securing funding on a county-wide basis (including significant financial infusions through the W. Garfield Weston Foundation), the overwhelming view was that the 'economics of ALUS' were simply unachievable and unsustainable. Program delivery professionals and policy informants, likewise, were decidedly unhopeful about the prospects for ALUS serving as a viable approach to fostering the provisioning of ES on a large scale. In the frank words of one policy informant:

> *"Our provincial and federal governments are very leery about coming in with even a provincial EG&S-type program because they're scared it's going to cost them a bundle*

and they don't know what they're going to get for it. Very, very leery. To the point of paranoia. Some are a little intrigued, but some are just terrified. I just don't think that these big programs [trailing off in unfinished thought] . . . we still have groups, some of the ALUS people they want a big, national program. When they talk like that ADMs run to the other end of the room. From a political point of view it's counterproductive."

In the words (and calculus) of another:

"I did the math one day based on what they were paying in Norfolk and, figuring out the modest number of acres of land we'd have to treat that way, it would cost between 75 and 100 million dollars a year, just in southern Ontario. And, I thought, 'Wow, that's a lot of money.' I don't see a line item like that as having [pause] . . . that dog won't hunt!"

To counter the cynics, one might point to the province-wide ALUS program. Alluding to this argument, one policy informant remained unconvinced:

"I think it's probably fair to say that ALUS is not on any policymaker's agenda in Ontario or Canada. People cite the PEI program as the great hope, but if you look carefully at it, it's all about regulation. And the money is attached to the regulation – very specific regulation of different areas . . . creeks, hilltops, headlands. It's a way to ease the transition into the new regulatory regime. So, it's not ALUS as people conceive of it [in Ontario]. It's a different animal entirely."

Intriguingly, despite the strong convergence in views about the untenable nature of ALUS from a financial viewpoint, discussions evoked what might arguably be the single greatest point of discord among landowners and program professionals in the study: the question of whether payments (if deemed appropriate in the first place) ought to be made on an annual basis or on a one-time or more bounded basis. Program professionals were largely unified in expressing concerns about annual payments, viewing it as more appropriate to pay (or incentivize) "reasonably and fairly" to help *establish* stewardship projects. Concerns, while reflecting pragmatic considerations, had strong philosophical underpinnings; the crowding out of intrinsically-motivated behaviours was viewed as worrisome from the perspective of prospects for enduring behavioural change. More prevalent among landowners, though not ubiquitous, was a feeling that annual or ongoing payments would, in many cases, be requisite in fostering the enhanced provisioning of ES. A more nuanced and 'softer' take on the issue of remuneration was expressed in the following way by a woodlot owner (and echoed among others):

"We talk about remuneration and so on and I think it's important to realize that generally the landowner is not looking to make money for protecting species at risk or

following the rules. He's just looking so that it's not going to cost him money. Just give us an even break so that it's not going to cost us money. We're not looking to get rich."

Such sentiments were framed in the language of "not taking away one's ability to earn a living," and expressed as a function of frustrations at increasingly 'racheted up' standards of environmental performance demanded by civil society actors without regard for the consequences felt (and the inequitable burden shouldered) by private landowners. In contemplating how a reconciling of views with regards to annual payments versus more time-limited payments might be achieved, a program delivery professional proffered:

"*Making payments for minimal ES gain may be the trigger to invest in new projects that are more needed."*

In demanding strong 'proof by way of performance,' such was thought to offer both a credible and equitable way forward in discerning the delimitations of payments.

ALUS was praised from the perspective of engaging a diverse range of partners and supporters, with specific reference to the ALUS Norfolk project. Such was viewed as a vital aspect of a workable governance framework – sharing the burden of cost, sharing responsibility with respect to project outcomes, and reducing risk (e.g., risks associated with a strong reliance on any one source of funding). Views among policy informants converged strongly around the point that government support is more likely to be forthcoming if other conservation interests and partners, particularly at the local level, are invested in a financial sense. As a policy informant explained in illustrating the circumstances under which governments might be persuaded to support:

"If you can hardwire it in so that they [decision makers] can say, 'Ok, we'll support programs at a local level if they've got performance measures and if they're 20, 30, 40 per cent funded by local organizations (the local fish and wildlife association, for example), I think that would be a lot more appealing."

While agreeing wholeheartedly that partnerships are valuable, one policy professional, meanwhile, had difficulty reconciling a related dimension of ALUS:

"There's no logical relationship in terms of where the money is coming from, even if they'd figured out the other side of the equation -- that the stuff that's being paid for is worthy of being paid for. It's not transferring that cost to the appropriate segment of society, so in my view it falls flat. It's just another paid extension program."

Similar sentiments were echoed by others, underscoring in particular the challenge of inspiring a populace largely disconnected from the realities of making a living from the land to support and invest in the provisioning and safeguarding of ES. On a more positive note, ALUS was widely complimented on its role in enhancing awareness about ecosystem services and rural livelihoods.

Problematic for ALUS, on the grounds of acceptability and effectiveness in generating ES, were issues of equitability. Among concerns expressed by landowners was the notion that the approach fails to account for past stewardship decisions, thus in a sense rewarding unfairly those who may have side-stepped such 'sacrifices' (the former made at personal expense, with the latter compensated). As a potential solution, one woodlot owner paused to consider whether it might be possible to 'grandfather in' certain past actions. A further concern raised was that the standard payment across the board (based on land rental rates) doesn't discern between greater and lesser investments of effort in terms of stewardship actions or ecosystem services delivered. While one landowner may implement relatively small changes, another might carry out a larger-scale effort resulting in more far-reaching ecological benefits, and yet both are paid the same acre-for-acre enrolled.

3.4.4 Forest Certification - Forest Certification Program of the Eastern Ontario Model Forest, Ontario

The voluntary Forest Certification Program administered by the Eastern Ontario Model Forest (EOMF) embraces eco-labelling and a market-based approach to stewardship wherein sustainable forest management practices are (in theory) rewarded in the marketplace (EOMF, 2015). Participation entails the development of a detailed forest management plan and a commitment by the landowner to adhere, under contractual arrangement, to a set of rigorous, internationally-recognized principles and standards set out by the Forest Stewardship Council of Canada, and furthermore, to undergo periodic third-partying auditing. The Forest Certification Program is supported by non-profit community development organizations, government, private donors and foundations, as well as a contribution by those certified in the program to help offset audit and related costs. The program adopts elements of technical assistance, information sharing and networking, and the use of partner signs and certificates as a means of recognizing the stewardship efforts of participants, in addition to its focus on enhanced market-based recognition.

As with MFTIP and the EFP, the Forest Certification Program was praised on the merits of its educational value, affording opportunities for learning through the management planning process, the field-level application of FSC principles and criteria, and even the audit process itself. The program's role in enhancing access to technical information and guidance, as well as practical training on wide-ranging aspects of forest management, was also noted as a particular strength. An invaluable attribute of the Forest Certification Program identified among participating landowners was the social support network that it gives rise to. As members of a certified *group*, individuals become part of a larger social network, united in a similar broad goal – this group dynamic offering opportunities for peer learning, and engendering a camaraderie of sorts. Related to this, an intriguing angle that emerged in the course of discussions was the sense of mutual responsibility and "obligation to others" that participants feel by virtue of being part of a group. The essence of this idea presents compellingly in the words of a certified woodlot owner:

> *"If I'm going to cut down a tree I think, 'Who in this group would oppose to me cutting this tree?' . . . And, it's a weird sort of thing where I then justify that tree cutting in my mind before I cut my tree."*

That the group certification structure may positively reinforce management decisions taken by individuals is insightful from the vantage point of appreciating motivations that may serve to enhance the collective provisioning of ES.

While certification was viewed as offering a potential avenue to distinguish oneself in the marketplace (as embracing a set of principles founded on an ethic of sustainable management), a key hurdle identified among landowners and program professionals alike was the lack of a market driver at present. As noted by many, in the absence of a strong market 'pull' and the price premiums envisioned as accompanying the sale of certified wood, certification in fact represents a cost to the landowner – a cost some are willing to pay, for others, a non-starter. While the group certification model embraced in the Forest Certification Program significantly reduces costs for individual participants to become certified (e.g., through shared administrative and audit costs), as noted among program professionals, the absence of a market driver also means that delivery becomes expensive (a challenge from the point of view of feasibility of implementation, particularly on a large scale). Despite these hurdles, some discussions about certification were imbued with a certain hopefulness, or at least cautious optimism, that the necessary market pull might yet materialize. In the words of one woodlot owner:

"Certification has the potential to serve as a major element in awakening the public to the benefits of conserving and championing managed forests, but it supposes a huge promotional effort in the public domain."

This need to inspire and generate public (consumer) buy-in was echoed loudly among landowners as a means of unlocking certification's untapped potential and for galvanizing support for the provisioning of ecosystem services in a more general sense.

Elsewhere, certification was cast in a positive light from the perspective of creating consumer choice, though concerns were expressed about the confusing proliferation of labels and claims on products (both forest-based and agricultural). Many felt that the rapidly growing array of labels and claims in the marketplace are overwhelming to consumers, and, in a sense, become meaningless – pointing to the need for a thoughtful and far-reaching marketing campaign for certification to be successful. One landowner's cynicism was palpable (this despite being a certified forest owner):

"I'm concerned that we get inundated with green spin, and we become skeptical about all these claims that you read everywhere by everybody. I think consumers are increasingly confused by the number of certifying bodies and claims being made. I just worry that maybe we should be thinking ahead enough to figure out another way. I think this becomes tainted."

Likewise, the "turf wars" among various certifying bodies were viewed as undermining the process of shepherding the public along in understanding the importance of sustainable forest management and appreciating the role that individuals can play in making ecologically-responsible choices in the marketplace. How a transcending of such difficulties might be achieved presents a thought-provoking line of inquiry, one which begs the question of how the complementarities among various certification systems might be championed while simultaneously respecting their differences.

As a pivotal feature of the inner workings of the Forest Certification Program, landowners and program professionals were asked to reflect on the value and desirability of a formal process of audit and verification. From the point of view of enhancing accountability and the defensibility of ecological outcomes, the notion of an audit process was, on the whole, seen in a favourable light. The audit process was viewed as lending credibility and transparency, particularly within the public sphere in terms of the demonstrability of ecological outcomes. In the course of annual and five-year audits under the auspices of the Forest Certification Program, performance is evaluated in relation to a set of rigorous principles and standards that participating

landowners have agreed to uphold. Corrective action requests (or CARs) are issued in instances where one or more participants in the group fail to meet stipulated standards, and, if not addressed in a timely manner, the group certificate is rescinded. Given the formalized nature of ground checking and verification, the Forest Certification Program was viewed by both actor groups as 'out-performing' MFTIP, the EFP program, and ALUS on the effectiveness criterion (i.e., as providing a greater level of assurance that desired ecological outcomes have been met, and thus better demonstrating the societal benefit).

At the same time, discussions about processes of audit and verification brought to light fears, among some landowners, about additional restrictions coming to bear in time, in a sense shackling them, further constraining the ability to make a living from the land. The apprehension in the mind of one landowner (a staunch landowner right's advocate) was unmistakable:

> *"The bottom line is that we [landowners] have been punished by too many bureaucrats, and, boy oh boy, we're careful before we take chances on anything like this."*

Similar anxieties were mirrored in the sentiments of others, both those with landowner rights affiliations and not. Tempering this, however, others suggested that the acceptability of an audit process could hinge heavily on how the intent or process is framed. Much could rest on the 'approach' to the landowner, as intimated in the following:

> *"If someone comes to my place and says, 'You'll do this, and you'll do that,' it alienates. But if he walks the property with me, has a dialogue (an exchange) with me, explains what his intentions are, and listens and says 'Yes, you could do that' or 'Well, you might consider doing this for this reason' . . . You see how it's different? [Rhetorically] It takes someone to accompany you, to genuinely 'walk' with you."*

The literal and figurative senses of 'walking with' the landowner here are enlightening; both serve as a foundation for building trust and mutual regard. In this way, both the nature of the approach to the landowner and the 'who' in the delivery of the audit were viewed as potentially influencing acceptability in a significant way – highlighting the need for an empathetic approach, one that is built on trust, and open-minded in finding and accommodating solutions.

3.4.5 Environmental Stewardship, United Kingdom

Environmental Stewardship is an agri-environmental scheme that provides funding to farmers and other land managers in England who commit to effective land stewardship (Natural England, 2010). Developed and delivered by the Department for the Environment, Food and

Rural Affairs (Defra) and Natural England (an independent advisor to the government), Environmental Stewardship embraces four tiers of participation. These include an entry level tier and a higher level tier, as well as an organic tier and a more recently-launched uplands tier (targeting hill farmers in 'severely disadvantaged areas'), each with different enrolment criteria and requisites that participants must meet. For example, whereas participation in the entry level tier involves the development of a simple farm environmental record (in effect a rudimentary accounting of farm environmental features) and relies on a well-defined points system for determining payments to farmers, the higher level tier requires both a farm environmental record and a comprehensive management agreement (developed with support from program advisors) setting out detailed stewardship goals and objectives to deliver a broad range of environmental benefits. And, while participation in the entry level tier is open to all, it is discretionary in the higher level tier (intriguing in this latter context is the coupling of target *areas* and target *themes*, which has opened participation to a broader complement of participants, while still preserving an attentiveness to spatially-targeted conservation). Contract lengths also vary by tier, with the higher level tier requiring a 10-year contractual commitment; the other tiers require a 5-year commitment. Likewise, payments to farmers vary among tiers, with more demanding stewardship actions (as expected under the higher level tier in particular) generally commanding greater rewards.

The idea of a tiered approach, as embraced in Environmental Stewardship, drew favourable appraisals among both landowners and program professionals, particularly from the point of view of enabling and encouraging the participation of a potentially broad range of landowners – from those new to the 'stewardship game' to those having been long immersed in stewardship efforts and ever seeking to do more and better. The appeal of having an entry level springboard to ease landowners into more advanced tiers of participation was expressed by one farmer in this way:

> *"If you came to me with the higher level [tier] right off the bat, I'd be like, 'Whoa, geez I'm not ready for that!' Whereas, if you could introduce the concept on an entry level, I think that has merit as a way of easing people into greater efforts over time."*

A program professional couched the appeal of having entry and higher level tiers in the language of offering a means of encouraging and moving landowners along a participation spectrum or continuum:

> *"I think the neat thing about the tiered approach is that even with that least level of work required by the landowner, it still gets them in the door, gets them participating. Then you've got their ear. Then you've got the potential to get them to step up a notch over time."*

Echoing much the same, another program professional highlighted equally the value in incorporating a mechanism for recognizing those who have invested in stewardship over many years, perhaps decades:

> *"It has a mechanism that can pull participation in from innovators and early adopters, who, decades ago, were doing the kind of thing that we're trying to encourage now. And, that's a big point against [programs like] ALUS."*

The preceding quote is illustrative equally of one of the cross-cutting issues that emerged in the course of the research: the importance of an equitable foundation for recognizing stewardship efforts and the provisioning of ES. From the perspective of landowners and program participants alike, Environmental Stewardship offered some notable strengths on equity grounds. For instance, the entry level tier is reliant on a well-defined points system for determining payments to farmers. In selecting from a menu of management options that one is willing to undertake, points are amassed. The more points amassed, the greater the financial reward. The structure not only rewards for greater actions undertaken, but, in principle, should encourage the landowner to continually strive to do better. As one woodlot owner observed enthusiastically, "So, it's driving you on. That's good!" In a like vein, actions requiring greater investments of effort and resulting in more substantive environmental improvements are rewarded correspondingly under the higher level tier. In juxtaposition, ALUS was criticized widely for its employ of a fixed per-acre reward regardless of the level of investment in stewardship efforts. Environmental Stewardship's embrace of a "more return on effort" philosophy was viewed as a more equitable basis for recognizing contributions.

The flexibility afforded under Environmental Stewardship was perceived as a highly desirable feature among landowners. The ability to select from a menu of some 80-plus management actions under the entry tier was appealing from the point of view of being able to 'custom design' things in a personalized way. Such seemed to resonate also from the perspective of "not being dictated to," inviting instead the opportunity to fashion one's own vision for stewardship aims and outcomes on the farm. The opportunity for very individualized contracts under the higher level tier also struck a particular chord for many. In a compelling illustration of how the individualization of contracts could help to foster the broader participation of landowners in programs to enhance the provisioning of ES, one woodlot owner framed things in this way:

> *"I think about this fellow I met recently at a focus group on species at risk, a strong advocate for property rights. It sounded to me like he would be quite open to sitting*

down with an individual and negotiating on his farm to give up some rights that he felt were his if you had a program like this that had all kinds of levels and flexibility . . . when you have that many variables, you get a lot of permutations, a lot of possibilities, so it almost becomes an individualized contract, very much so. I could imagine him negotiating in this kind of situation. I could see how this might even satisfy the staunchest advocate of property rights."

The desire for flexibility notwithstanding, some pointed to the seeming complexity in developing a plan of action under Environmental Stewardship. As articulated by one woodlot owner: "Some don't have the capacity, some may be intimidated by it. So, simple is critical." In probing this idea further, discussions elicited the suggestion that the complexity and 'intimidation factor' could be mitigated with access to technical support and guidance (many citing the EFP as an example where this has been done to good effect; and seemingly such support is afforded under Environmental Stewardship as well). Meanwhile, from a deliverability perspective, the flexibility afforded under Environmental Stewardship was seen as a double-edged sword of sorts, making it "administratively heavy" and "staff-intensive." While such concerns were articulated overwhelmingly by program actors, they were not lost on landowner participants, with many in the latter camp expressing cynicism about the likelihood of political support for a potentially resource-intensive program like Environmental Stewardship in an eastern Ontario or Canadian context (pointing also to the vastly different geographies of scale marking U.K. and Canadian contexts). The issue of political support aside, the findings in this work intimate that a successful ES recognition framework needs to strike a delicate balance between the need for flexibility and an attentiveness to the administrative repercussions of implementing increasingly complex institutional designs.

In exploring reflections on contract length, some landowners expressed anxieties about the potential for longer-term commitments becoming an encumbrance on the property. Somewhat paradoxically, among landowners there was an equally strongly articulated appreciation for the importance of long-term commitments in an ecological sense (as supported in the higher level tier especially). In a particularly animated exchange in one focus group, a farmer, playing the role of devil's advocate, encouraged introspection on the part of peers in thinking about how perceived encumbrances on a property under a long-term contract might in fact be turned advantageous:

"So, imagine a scenario where there's zoning that says, 'Thou shall not develop,' versus in this case [under Environmental Stewardship] where you're saying it won't be developed, but there's x dollars flowing to the owner a year for ecosystem services. That may be more attractive for a sale. At least this approach is providing some revenue that comes with the property."

Throughout the course of similar discussions, contract length in and of itself was deemed peripheral in importance to issues of delivery organizations embracing a workable degree of flexibility in contract terms and provisions, such that would offer certain safeguards for the landowner (e.g., safe harbour arrangements in relation to species at risk; immunity from sanctions in the event of natural disasters bringing destructive ecological forces beyond one's own control). The broader discourse here evoking candid commentary by landowners on the underlying imperative of relationships built on mutual respect and trust, and, so too, of upholding reciprocal obligations:

> *"I've bought in [in terms of stewardship programming], but every time the government switches I'm wondering when their buy-in is going to quit. So, I'd like to see the commitment more permanent on the other side, more than my side, because once I've bought in I've bought in. When the first forestry agreement program that we were involved in ended, we kept on doing what we were doing. But every time somebody in policy up high changes that agreement program [trailing off in thought] . . . I'd like to see the commitment on the other side saying, 'Yeah, we're going to keep this agreement once we've written it, we don't care if the Conservatives or NDP or Liberal or whatever are going to be there,' that's the permanence I want to see. Then you'll get the buy in, then you'll get the trust from the landowners."*

3.4.6 EcoTender, Australia

EcoTender is one of a suite of market-based programs originally piloted by the State of Victoria's Department of Sustainability and Environment, now the Department of Environment, Land, Water and Planning (DELWP). At the time the field research for this study was underway, participation was actively being solicited under EcoTender. While such is no longer the case, the experiences and lessons learned in the demonstration phase of EcoTender continue to support environmental tenders being implemented by regional organizations such as Catchment Authorities and Landcare networks in partnership with the State. An effort is also currently underway to document the experiences of landowners using anecdotal information collected as part of a broader evaluation of EcoTender (M. Butler, DELWP, personal communication, 2015).

In brief, EcoTender was structured upon a bidding process (State of Victoria Department of Sustainability and Environment, 2008; see also Eigenraam et al. 2007) in which landowners competitively tendered for contracts to deliver multiple ecosystem services, focal among which were water quality, carbon sequestration, and biodiversity services. Bids submitted to undertake agreed-upon management actions (as set out in a management plan) were assessed on the basis of estimated on-site and off-site environmental improvements, the environmental significance of the

site, and cost, as determined by the landowner (in conjunction with cost, an Environmental Benefits Index was used to determine 'value for money'). Successful landowners received annual payments over a 5-year contract period (contingent on meeting reporting requirements and, moreover, on making satisfactory progress towards targets identified in the management plan). An option for permanent protection was available under EcoTender, with such contracts registered on the property title and binding all future owners (not so in the case of the 5-year fixed-term contracts). Notably, field officers played a pivotal role in assessing sites, in identifying management options for landowners to consider (and in providing advice as to how management options would be scored in a bid), and, ultimately, in penning the management plans that formed the basis for the bids then finalized and submitted by landowners. Of note equally, EcoTender was innovative in its embrace of an Environmental Benefits Index (fore-mentioned) as well as a leading-edge modelling tool called EnSym (Environmental Systems Modelling Platform) in the assessment of ecological outcomes.

In exploring EcoTender, especially intriguing was the overwhelmingly off-putting reaction it elicited from landowners on the point of its competitive nature. In what is perhaps best described as a distinctly culturally-shaped response, many landowners expressed a strong distaste in relation to the notion of competing with neighbours. Indeed, such a notion was quite antithetical in what was viewed as a cultural context in which a strong 'culture of cooperation' exists – from barn raisings typical of days yore that drew farming community members together, through present-day collaborations as might be seen, for instance, during haying periods, and even in stewardship activities such as fencing cattle out of streams. In the vehement words of one farmer:

> *"This is the first program that got my back up. I could feel it building in me. Now I'm competing with my neighbour for money . . . So, all of a sudden [ecological] information gets held tight to the chest. We're not sharing information."*

Concurring with landowner sentiments such as the former, and in a foreshadowing of sorts, a program professional remarked:

> *"My concern when we talk tenders is that you're pitting landowner against landowner. And that doesn't go over well."*

In the course of conversations far more appeal was expressed for approaches founded on a basis of cooperation. And while there was a 'softening' in perspective among some landowners when told that bids were accepted by groups of landowners under EcoTender, on the whole, the findings imply that the competitive nature of EcoTender and the (ostensible) culture of

cooperation existing in eastern Ontario might not be particularly well-matched bedfellows in a governance framework for fostering the provisioning of ES.

In a more favourable light from an acceptability point of view, landowners liked the idea of setting his or her price for the ecosystem services provided under contract, and that bids could be tailored to one's own individual values. At the same time, the very concept of bidding in a conservation context was, in a sense, foreign to many, oftentimes prompting the question, 'What would I bid on?' To this end, the support of field or delivery staff was deemed important. Interestingly, in one focus group discussions came full-circle as participants themselves generated ideas about what one might bid on. While at first blush the concept was strange and perplexing in some measure, the collective thinking of the group led to some creative ideas about items or actions that a bid might encompass. Such is vividly illustrative of how mutual learning in focus groups can be generative of innovative ideas, solutions or ways forward.

In a further storyline related to acceptability, conversations among landowners pointed to the need for a high level of transparency in assessing and selecting bids, and, as such, the credibility of the delivery organization(s) was deemed critical in imagining a similar approach in an eastern Ontario context. Inevitably such conversations turned to related concerns with respect to deliverability, and, as with Environmental Stewardship, EcoTender was viewed as administratively-demanding, for instance in requiring a very structured and staff-intensive process for evaluating bids, and providing the necessary field support (e.g., doing the ground assessment of sites, working closely with landowners to develop management plans, and so forth). Such was worrisome from the perspective of both program professionals and landowners, as reflected in the decided skepticism of one woodlot owner:

> *"A concern I have with this is the size of the staff and the quality of the staff it would require to administer, to make the decisions, to sort out the contracts. This is really dependent on the ability of the government people to assess what they're really getting. And I can't see that we [in Canada] would have the political will to hire such a staff."*

On the latter point of political palatability, a thoughtful counter-proposition was presented by a program professional:

> *"This competitive dynamic on something like conservation [pausing] . . . we usually don't think of it this way. On the other hand, given the mind-set of the current government in power this may have more appeal as a mechanism than some of the softer, touchy-feely approaches that we know, are most comfortable having worked with, and know they kind of work. That may be a consideration. What are you able to sell up the pipe as a suite of approaches that gets tested?"*

Recognizing that fiscal realities would likely preclude ES recognition approaches in which (the ideal) of universal access is feasible, most felt that EcoTender's strategy of deliberately targeting financial resources would garner greater political support. By the same token, for some (program professionals and landowners alike), it raised the issue of equitability in that the 'selective' approach taken in EcoTender might not reward all for going beyond a certain 'bar' or standard (in contrast with MFTIP, for example, in which access is universal, and, if you meet the bar, you are remunerated accordingly).

EcoTender's use of science-based ecological indices and modelling tools, meanwhile, was viewed in an exceptionally positive light among landowners and program professionals alike, particularly from the vantage point of lending integrity in the assessment of ecological outcomes. As such, EcoTender performed well in relation to the effectiveness in generating ES criterion (performing roughly on par with the Forest Certification Program discussed earlier). In an interesting twist relative to the effectiveness criterion, several participants in one of the landowner focus groups expressed concerns about arriving at the 'lowest common denominator' (i.e., lowest quality of improvements) if lower-cost bids tend to be accepted in a conservation auction setting. Such seemed to resonate among program professionals as well, with one participant in particular citing personal experience in observing like outcomes:

> *"I've had a lot of problems with low bids over my career. Low bids don't often deliver what they are supposed to deliver."*

Such anxieties seem to harken back to earlier comments about the imperative of transparency in assessing bids. The findings here suggest that, absent a watertight transparency, EcoTender (and similar approaches) could struggle to gain traction in an eastern Ontario context.

3.4.7 Los Negros Valley Program of In-Kind Payments for Bird Habitat and Watershed Protection, Bolivia

Spawned by critical issues of deforestation and increasing water scarcity, the Fundacion Natura Bolivia, a non-government organization, initiated a small-scale program of payments for bird habitat and watershed services in the Los Negros Valley (International Institute for Environment and Development, 2012; see also Asquith et al. 2008). The financing structure for the program includes support from the U.S. Fish and Wildlife Service (who has a vested interest in the protection of migratory bird habitat), as well as contributions from downstream irrigators

via the local municipality. Distinctive in the case of the Los Negros Valley program is its employ of *in-kind* payments to upstream landowners. These in-kind payments take the form of beehives and apicultural training; an annual payment of one artificial beehive is awarded for every 10 hectares of forest protected a year (a cash equivalent of approximately $3 U.S. per hectare per year, plus the value of the accompanying training). Payments have been expanded more recently to include fruit trees and barbed wire. Under the program, landowners must agree to enrol forest plots (negotiated annually) that serve as 'conservation parcels.' Honoured contracts are eligible for enrollment in subsequent years.

The idea of an ES recognition program structured around payments in-kind elicited mixed reactions from landowners in the study. The practicality was appealing to some, the approach viewed as offering a potentially wide scope of possibilities in terms of contributions (or supports) that could reduce costs for the landowner (e.g., native species for restoration efforts, solar powered watering units, professional services of varied nature). In the down-to-earth articulation of one farmer:

> *"For this old boy, I'd be happy with the beehives, the fencing and the fruit trees. I think that's a hell of an idea actually, I do. I like that idea. Something useable."*

For others, contributions in-kind were less appealing from the point of view of potentially limiting flexibility for the landowner. Mincing no words, another farmer remarked, "Frankly, I'd rather receive it in a cheque." Such responses tended to be premised upon sentiments of being well-equipped to create (dollar-for-dollar) efficiencies, with monetary forms of recognition viewed as enabling a tapping into the ingenuity and creativity that one might offer in conceiving of and, ultimately, effecting a stewardship project. [Intriguingly, there seemed to be a propensity for farmers to be more likely to cite a desire for cash over in-kind than woodlot owning landowners (the preceding quote notwithstanding), suggesting a line of inquiry deserving of further examination elsewhere.] In pursuing a different line of thinking on the point of flexibility, one woodlot owner mused about the prospects for a hybrid approach:

> *"Perhaps one of the aspects of this is why couldn't a program be flexible enough so that the landowner could choose that he wanted some cash for his input, or, 'Thank you very much, I'd like some professional consulting this year'?"*

Meanwhile, for program professionals in particular, the potential for a virtually limitless scope of possibilities with in-kind payments was problematic on deliverability grounds, many having

difficulty conceptualizing how the range of interests or desires for in-kind support might be accommodated, particularly on a large scale.

Despite mixed reactions to the idea of payments in-kind, notable in this study was the convergence in views relating to the desirability of enhanced access to professional services, or, in the words of a program professional, access to "someone versus something." Among landowners and program professionals alike, access to professional or technical services was most widely cited as an appealing and valuable form of in-kind (ranging from woodlot services such as tree marking and assistance in developing forest management plans, to assistance with innovative business models on the farm, and access to work crews). Much discussion in this vein centred on the widespread loss of agricultural and other extension professionals in recent decades, a trend ubiquitously viewed as regrettable. In the discouraged words of one farmer:

> *"They got rid of all our ag guys, and everybody we turned to for help."*

As another landowner reminisced:

> *"There used to be agricultural experts that would go around and sit down at the farm table and share the knowledge they have. I find that I'm researching all the time. I mean, where are those experts?"*

Echoing the former sentiments, calls for re-instituting 'boots on the ground' assistance and for rekindling opportunities to 'get back to the kitchen table' were prevalent among landowners, both viewed as fundamentally important in enhancing uptake (and value) in stewardship programs – an insight not lost on program professionals, as reflected in the following exchange (pseudonyms are adopted below):

> *Nate - "It would be nice if there was a mechanism for some one-on-one. Landowners appreciate that, and they miss what we had many years ago."*
>
> *Elise – "For sure. Landowners love the help, they love the service, they love the products. It works."*

Salient to the conceptualization of a workable ES recognition framework, landowners pointed to the importance of offering such services through associations or entities well known on the landscape – credibility and trust, again, of the essence.

A thought-provoking dialogue prompted in exploring the Los Negros Valley program surrounded the 'saleability' of in-kind payments. In contemplating prospects for garnering broad

public support for the provisioning of ES, some felt that in-kind payments would be more saleable and viewed as more accountable than direct cash transfers to landowners. As expounded by a woodlot owner:

> *"The problem with straight-out subsidies is that often people think, 'Oh there's so and so or such a category of people who are just rolling in subsidy money, and not providing a service for it.' To my mind, at the level of property holders of our size, it's probably a good argument for focusing on remuneration in-kind as opposed to cash. It's less likely to be seen as open to a rip-off [in the public eye]."*

While beyond the scope of this research effort, the deductive reasoning here brings to the surface a profoundly important and complementary research angle: that of delving deeply into civil society's conviction vis-à-vis commitments in support of the provisioning of ecosystem services by private landowners. Also illuminating in the discourse about the saleability of in-kind payments, with particular reference to supplying people or human resources to support stewardship efforts, was the notion of there being an invaluable social benefit. To give an example, participants across several focus groups cited the immense social benefit in creating openings for youth to hone employment skills, as afforded, for instance, through Stewardship work crew experiences. Extending this example outwards, others pointed to the cultural enrichment afforded through such experiences (e.g., appreciating the significance of cedar rail fence making in eastern Ontario, and participating first-hand in the revival of the disappearing art). In making the 'sales pitch' to civil society actors broadly, these types of social benefits were viewed as constituting an important (and oftentimes overlooked) leveraging point.

3.4.8 Pago por Servicios Ambientales (PSA) Program, Costa Rica

Widely regarded as the poster child for early payments for ecosystem services (PES) approaches, the Pago por Servicios Ambientales (PSA) program was established in 1997 in response to devastating rates of deforestation in Costa Rica (see FONAFIFO, 2012; Pagiola 2008). Managed by FONAFIFO, a semi-autonomous agency with legal status, financing for the country-wide PSA program is derived principally from a national fuel tax, while supplemented in considerable degree through a loan from the World Bank and funding from the Global Environment Facility (with private companies and service users supporting to only a limited extent at the time of writing). Payments are available to landowners for the provision of four ecosystem services that are formally recognized under Forest Law 7575. These include: water services; biodiversity; carbon sequestration; and, scenic beauty for recreation and ecotourism.

An overriding reaction among both landowners and program professionals in terms of the likely viability of the PSA program was that a dedicated tax was likely to be perceived as "risky for governments," with targeted monies reducing fiscal flexibility. As such, there was wide agreement that a PSA-like approach would be unpalatable and unlikely to garner the political and public will required in an eastern Ontario or Canadian context. As one landowner mused:

> *"Hmmmm, a dedicated tax for ecosystem services [pausing to reflect briefly] . . . We're not into dedicated taxes very much in this country anyway. To have one for ecosystem services, to me, is a non-starter."*

Among landowners, concerns were also expressed over how tax revenues collected would be distributed, and whether or not they would in fact reach the landowners truly engaged in safeguarding or providing ecosystem services. The apprehension of one farmer was clear: "How do you get government to put it [tax revenue] where it's meant to go?" Issues of mistrust aside, others were decidedly cynical about the efficiencies in administering a like tax. As a farmer framed things, "The bureaucracy absorbs half of it."

An aspect of the PSA program that did capture the interest of landowners across a number of focus groups was the formal institutionalization of the suite of ecosystem services in a national legislative framework. Defining and embedding the ecosystem services to be recognized in this way was viewed as a valuable tactic in terms of crystalizing political and public support, as reflected in the cautious optimism of one landowner:

> *"I like the idea of enshrining it federally. In some ways it's difficult. But surely the feds have enough information to realize how critical it is. So if you could at least get them on side and money flowed down to the provinces and territories, it would facilitate it."*

And, while discussions of a more general nature about the sustainability and stability of income streams under an ES recognition framework pointed to the problematic of changeable political winds, there was a feeling that such vulnerabilities might be mitigated with the embedding of the ecosystem services in a legislative framework, as in the PSA program.

Discussions about the PSA program also pointed to the merit in contemplating what resonates with the public in terms of the driver for protecting ES. In the case of the PSA's genesis, coupled with the deforestation driver, there was an associated awakening to ecotourism considerations (the rapid denuding of forests inauspicious for a prosperous ecotourism industry). In reflecting on the design of an ES recognition framework in an eastern Ontario context, one program professional tendered:

"It seems to me if we're talking about ecosystem services in this particular area [eastern Ontario] one of the key starting points is to come up with a really solid definition of what's the driver. Is it water? Water flow regulation and water availability? . . . Everybody can relate to 'we need water to drink, we need water for crops, we need water for white-water rafting.'"

Interestingly, water figured prominently across focus groups as a promising 'lever' in generating public support (with habitat for species at risk a runner-up). In a related vein, the importance of how issues are framed and communicated to the populace at large generated a great deal of discussion among landowners and program professionals. In illustrating this point, a program professional pointed to a campaign to protect the waters of Chesapeake Bay, in which the slogan 'Save our Crabcakes' was adopted over 'Save our Water,' the former finding greater resonance in eliciting support. Meanwhile the slogan "Clean Water, Good Beer!" was suggested somewhat facetiously in one of the focus groups – while offered tongue in cheek, nonetheless driving home the point echoed by others: that relatable messaging is of the essence.

Following the preceding line of thought, also illuminating in the course of discussions about the PSA program was the prevalent sentiment that there is no perceived crisis or emergency in the Canadian public mindset in so far as safeguarding ES is concerned, with little to spur serious action. Whereas the glaring 'crisis in the forest' in Costa Rica prompted the PSA program (and, likewise, issues of severe salinization gave rise to EcoTender), there was a strong feeling among landowners and program professionals alike that the Canadian public writ large senses no urgency to act (perhaps a culturally-conditioned response given the vastness of the country and the seemingly inexhaustible supply of natural capital). As reflected in the contemplations of a woodlot owner:

"Do we really care in our society in general to put our money where our mouth is (if our mouth is even there) to put money behind a program like this? I'm not sure that we do yet. I don't think that we've seen enough environmental degradation that actually affects us personally to generate the awareness that precedes the caring . . . I think it's a long time before we'll pay meaningful payments to landowners for ecosystem services. That said, an important thing has come up for me, and that's the divide – which you know there is – the culture is really kind of the rural versus more urban."

Discussion about the aforementioned cultural divide struck an emotionally-charged chord among landowners. Frustrations converged around the "insensitivities" in relation to the realities of making a living from the land, with rural life often viewed through a quaint or romanticized lens. In the eyes of some, the disconnect manifesting as much in a *rural*-rural divide as an urban-rural divide. Time and again the importance (the imperative really) of reconnecting people to the rural

working landscape was underscored by landowners (with such sentiments also mirrored in the consciousness of program professionals and policy informants). Consistently across focus groups the fostering of such a 'rediscovery of the rural' was viewed as a fundamental point of departure in generating the awareness, and the caring, to drive support for ES recognition initiatives.

3.5 Discussion and Policy Implications

Table 3.1: Important governance attributes as related to acceptability, feasibility of implementation, and effectiveness in generating ecosystem services

	Criterion		
	Acceptability	**Feasibility of Implementation**	**Effectiveness in Generating Ecosystem Services**
Important Governance Attributes	Grassroots, bottom-up dimension Trusted, credible delivery organization(s) Arrangements founded on principle of reciprocal obligations Collaborative / cooperative approaches Settings generative of opportunities for social / peer learning Models of shared responsibility – 'Need to feel valued' Range of incentives that are sensitive to different motivations	Public /political support Institutional flexibility, while being attentive to administrative burden Accessibility of field delivery / technical support (commensurate with program complexity) Diverse partner support, including support at local level (sharing risk, etc.)	Metrics, 'proof by way of performance' Credible, science-based performance measures (e.g., ecological indices, modeling tools) Transparency (e.g., in verification of outcomes) Approaches that foster sense of 'investedness,' authorship / ownership in projects

The analysis in the preceding pages has been fundamentally preoccupied with the interests of private landowners in eastern Ontario for different ES governance mechanisms. Conversations with those immersed in program delivery and policy development have also informed the analysis. In exploring a range of ES recognition mechanisms instituted around the world with these actor groups, insights were offered in terms of their appeal and likely viability, as well as potential hurdles or barriers to instituting them in an eastern Ontario context. While the empirical richness captured in the analysis is in some ways overwhelming, and the findings defy an uncomplicated elaboration of the 'perfect' governance model, there was discernable convergence towards some consistently appealing governance features (as summarized in Table 3.1). These

are discussed in brief, parcelling by the three evaluative criteria (introduced earlier) that the study participants were encouraged to reflect on: *acceptability* or likely degree of buy-in and support for the mechanism in question from a broad societal perspective; *feasibility of implementation* or deliverability of the mechanism in a practical sense; and, *effectiveness in generating ES*, referring specifically to assurances in terms of the tangible (demonstrable) delivery and/or protection of ecosystem services.

3.5.1 Acceptability

Striking from the point of view of acceptability was the strong appeal for those approaches exhibiting a grassroots orientation, as with the EFP, ALUS, and the Forest Certification Program administered by the EOMF. Such is supportive of Walker (2006), who, in a compelling exposé about newly-minted collaborations in the American West between farmers, ranchers and environmentalists, points to grassroots collaborations as offering "the best hope for the survival of farmers and ranchers, and the unique open landscapes and environmental qualities of the American West." Inextricably caught up with the appeal of such grassroots approaches were expressions of the importance of trust and credibility – as formative in garnering landowner participation (as supported, for instance, in Guerin and Guerin 1994 and Smithers and Furman 2003). The EFP was illustrative in this regard, with its success attributed, in large part, to the cadre of well-respected and trusted facilitators involved in its delivery. In a closely related storyline, as a precondition to a successful ES recognition framework, calls for arrangements founded on the principle of reciprocal obligations were pervasive among landowners. Together, these attributes (grassroots delivery, trust and credibility, reciprocal obligations) point to a thread garnering increasing interest in the scholarship on alternative food systems: that an attentiveness to cultivating 'relations of regard,' in which reciprocity and reflexivity figure prominently, may offer a promising way forward in re-imagining and re-constituting our relationships with food, the biological landscape from which it originates, and, above all, the actors that take centre stage in its production. Following Sage (2003), for instance, how might extending the concept of relations of regard (beyond foodstuffs, and into the realm of other ecosystem services) inform the design of ES recognition framework? The policy upshot suggested by the findings here is that program viability is likely to be profoundly compromised in the absence of relationships that are built upon mutual trust, respect, and understanding.

Also from the vantage point of acceptability, a key narrative that emerged was the strong distaste for approaches in which competition figured prominently, as in the case of EcoTender,

for instance (under which landowners engage in a process of competitively tendering to provide ecosystem services). The very notion of competing against one's neighbour was antithetical for many, and was accompanied by intimations that a distinctive 'culture of cooperation' exists in eastern Ontario. As such, cooperative approaches held more appeal among landowners, with the pervading sentiment that approaches with competitive leanings would struggle for traction. The existence of this palpable culture of cooperation produces some intriguing policy questions. How best to capitalize on such cooperative sensibilities? For instance, while not a feature of any of the ES recognition approaches explored in this study, what prospects for agglomeration bonuses (e.g., see Parkhurst et al. 2002) intended, conceptually, at least, to encourage stewardship actions on neighbouring parcels of land? Goldman et al. (2007), in a like vein, explore the concept of "cooperation bonuses," rewarding particular landscape configurations in addition to contiguous acreages. The findings here suggest that such bonuses might be quite attractive to landowners, and potentially generative of enhanced ecological outcomes in an eastern Ontario context. Perhaps a reflection of this cooperative ethos, strong appeal was also expressed in this study for settings that foster peer and social learning. Within the scholarship, such collective learning and social mobilization is viewed as a promising means of fostering institutional innovation and effective problem solving in the face of socio-ecological complexity and uncertainty (e.g., Sinclair et al. 2008; Diduck 1999), notwithstanding calls for more systematic examinations of learning goals, expectations and outcomes (Fitzpatrick 2006; Armitage et al. 2008). In contemplating the incorporation of such learning platforms in a framework for fostering the provisioning of ES, there is seeming wisdom in the observation proffered by Michael (1995): that there is much to be gained from learning approaches that are both humble and compassionate.

Perhaps most illuminating in this study in relation to the issue of acceptability was the discourse surrounding motivations for stewardship and the appeal of different forms of incentives. Among landowners, expressions of feeling a profound duty of care and a deep sense of pride in their work were coupled with impassioned articulations for the need for support. This characterization suggests that a more complex dynamic may be at play than invoked in the traditional binary of the intrinsic versus the extrinsic in scholarly debate. The words of a woodlot owner illustrate this with elegant poignancy:

> *"My motivation relative to my woodlot is a bit more poetic, lyric, contemplative than other things because when I walk in the woods it transports me elsewhere. By contrast, in the aftermath of the ice storm [in 1998] I thought to myself, 'Ouf, it's going to be difficult to create that poetic, lyric experience of my woodlot.' In other words, to*

continue to make that poetry, it will require that I have something monetary to support. Otherwise it will be difficult to live strictly on the poetry of the thing."

Provocative from a policy development perspective is the finding suggested here that the intrinsic-extrinsic binary may oversimplify explanations for adoption behaviours, disregarding important nuances. In this case, motivations of a profoundly intrinsic nature co-existing alongside those exhibiting extrinsic tendencies. What this might intimate in relation to concerns about motivational crowding (see Frey 2012) is intriguing. For instance, under such circumstances, would the introduction of an external reward trigger a truly diminishing effect in intrinsic motivation? In any event, it would seem that an issue of equity comes into view: under the public good lens, if landowners receive nothing in the way of support from civil society actors for providing or safeguarding ES, a lack of equity results. By the same token, if civil society support is provided to landowners in the absence of duty of care, the equation once again yields a lack of equity. Neither scenario is likely to be generative of the conditions sympathetic to the sort of social compact that Gutman (2007) envisions as critically important in bringing about a more equitable sharing of the costs and responsibilities associated with the provisioning of ecosystem services – a central underpinning of which is a model of shared responsibility. Coinciding with Gutman's imagining of a new social compact, landowners and program and policy professionals alike were drawn keenly to the idea of a model of shared responsibility. And, for landowners, implicit in this shared model was the 'need to feel valued,' a finding invoked similarly by Vanclay (2004) in elaborating his suite of 27 social principles for agricultural extension. In his expounding of the Australian experience:

"In terms of natural resource management, Australia is asking its farmers to make a significant personal investment for what is largely a public benefit. Because of notions of stewardship and the concept of good farm management, most are prepared to make their contribution. But they need to know that this contribution is appreciated and valued by the broader community."

With a simple substitution of the word 'Canada' in the place of 'Australia,' such beautifully captures the essence of sentiments shared by the participants in this study.

A final point on the question of motivations vis-à-vis acceptability before turning attentions elsewhere: while it would be naïve to suggest that financial motivations are inconsequential based on the body of work here, the findings also suggest that an appeal to economic incentives alone may miss the mark – again, echoing Vanclay. Such is reminiscent of Leopold (1949), who long ago bade us to "quit thinking about land use as solely an economic problem." In ignoring

the socio-reflexive nature of decision making on the farm and in the woodlot, we surely do ourselves a disservice. Enlightening from this perspective is the work of Sheeder and Lynne (2011) on empathy-conditioned conservation. They make a convincing case to suggest that conservation decisions are shaped by 'shared other-interests' based on empathy-sympathy – interests that transcend the realm of the self-interested, financially motivated. That such empathy-conditioned motivations may be of import is seemingly supported in this research, as manifest, for instance, in the "sense of obligation to others" evidenced in the Forest Certification Program. As for the policy implications? It seems inevitable that a range of incentives will be requisite in an ES recognition framework if we hope to garner wide acceptance. Moreover, it will demand a sensibility to the socio-reflexive workings shaping motivations.

3.5.2 Feasibility of Implementation (Deliverability)

Turning to matters of deliverability, the imperative of garnering substantive political and public support was foremost in the minds of both landowners and program and policy professionals. In the absence of a profound societal awakening to the importance of supporting the provisioning of ES, an impasse was viewed as inevitable. A sense of dispiritedness about the prospects for this sort of awakening was palpable, despite feelings that some modicum of forward momentum in bringing the ES concept into the public consciousness was occurring through programs like ALUS (with ALUS viewed as a forerunner in this regard in the Canadian context). And yet, when encouraged to think about avenues for creating awareness it occasioned some imaginative possibilities ranging from woodlot and farm tours through television adverts in the spirit of Canada Heritage Minutes. Anxieties about institutional stability and the sustainability of support streams were also top of mind. Notable from a policy perspective, there was considerable appeal for the idea of embedding the concept of ES in a legislative framework as a way of crystalizing support. The PSA program in Costa Rica, for instance, elicited strongly favourable reactions from the point of view of being 'legislatively embedded,' with its suite of four ecosystem services formally recognized and, in a sense, cemented under Forest Law 7575. Such was viewed as lending enhanced stability, making it politically contentious and difficult to effect a sudden 'about face' (in much the same spirit as Godard, 2012, who underscores the fact that because credibility carries weight governments cannot disregard international treaties and national laws, or, in the very least, do themselves discredit in doing so). MFTIP, likewise, was viewed as being at an advantage (as less open to "being eroded") given its nesting under the province of Ontario's Assessment Act.

Also on the point of deliverability, landowner sentiments coalesced strongly around the need for flexibility in the design and delivery of programs intended to foster the provisioning of ES. The Environmental Stewardship scheme, for instance, in its embrace of multiple tiers of participation (from entry through more exacting tiers) was appealing on the grounds of inviting participation from a potentially broad complement of landowners. The notion of a governance system that embraces different tiers or 'points of entry' is intriguing from a policy perspective in seemingly inviting or enabling a 'moving along' a participation continuum; the findings in this work intimate that an architecture embracive of multiple tiers of participation could produce such an effect. While appreciating the need for institutional flexibility, program delivery professionals tended to be more circumspect in their appraisals, mindful of the administrative burdens that tend to accompany increasing complexity in design. In the spirit of Armsworth et al. (2012), the findings imply a delicate balance between affording flexibility in institutional design and being attentive to the administrative repercussions. Moving things in a somewhat different, though related, direction, landowners were of the firm conviction that success in implementation was likely to be shaped in a significant way by the nature and extent of field delivery (or technical) support. Accessibility to field delivery staff was deemed an essential governance feature, as unveiled in animated conversations about the regrettable loss of farm and woodlot extension services in the province of Ontario in recent decades (supportive of Milburn et al., 2010, in their assertion that the loss of such services represents "a recipe for decline," perhaps indeed harkening the "beginning of the end" in so far as garnering the widespread provisioning of ES is concerned). That access to such services be commensurate with program complexity was also underscored, EcoTender serving as a case in point. Absent the considerable support of delivery staff in helping landowners to flesh out bids, the viability of EcoTender came under scrutiny (the problematic of its competitive nature aside).

Diverse partner support emerged as a further governance attribute regarded as vitally important from the point of view of feasibility of implementation, striking a chord among landowners and program delivery professionals. Amidst rife cynicism that governments could be turned to as lead champion and backer for ES recognition supports, many pointed to the need for engaging diverse partners (consistent with articulations supportive of a shared model of responsibility). ALUS was viewed as having performed well in this regard, however, the herculean effort required in successfully garnering and sustaining such partner support was viewed by most as untenable on any scale of significance (absent a profound kindling in the public consciousness as to the role landowners play in providing and safeguarding ecosystem services). Notably, among policy informants in particular, the importance of securing the support

of organizations and interests at the local level was viewed as enhancing prospects for garnering government buy-in and support. Analogous to diversifying one's financial portfolio in the interest of reducing risk, securing the support of others (i.e., outside of government) was viewed as an integral part of a risk management strategy, wherein multiple interests share responsibility for project outcomes, and no one interest is "left holding the bag."

3.5.3 Effectiveness in Generating Ecosystem Services

> *"Much of the current enthusiasm for ecosystem services projects in the conservation world is an act of faith. At some point, however, that faith will need to be backed up by irrefutable data showing that these projects benefit both people and nature."*
> *(Tallis et al. 2008)*

Drawing attention to the pivotal issue of effectiveness in generating ES, the need for scientifically-grounded 'proof by way of performance' was perceived as important among program delivery professionals, policy informants and landowners – echoing the assertion by McCarthy (2005) that, "The institutionalization of multifunctionality demands metrics." EcoTender was evincive in this regard, eliciting favourable reactions from the vantage point of its embrace of science-based indices and cutting-edge modelling tools in validating ecological outcomes. Likewise, on effectiveness grounds, the Forest Certification Program was viewed as out-performing MFTIP, the EFP program, and ALUS given its formalized process of verification by third-party audit (the others reliant, in large measure, on 'honour system' principles) – notwithstanding undercurrents in the course of more wide-ranging conversations about barriers to stewardship to the effect that having 'Big Brother' breathing unnecessarily down one's neck can be tedious at best, riling at worst. To this point, and of intrigue from a policy perspective, while landowners were apperceptive of the fact that increasingly robust measures of performance would likely be demanded by a (genuinely) contributing public under an ES paradigm, conversations often turned to questions of the nature of the 'approach' to the landowner in framing and communicating the intent and spirit in which processes of verification are being undertaken – more to the acceptability issue perhaps, but insightful, nonetheless, in contemplating how efforts to substantiate effectiveness in generating ES might be enhanced, or, conversely, thwarted, from the get-go.

The necessity of such metrics in itself raises a pivotal issue: that of scale. As Grêt-Regamey et al. (2014) note, diverse approaches to model and map ecosystem services and the different scales of ecosystem services assessments may yield a wide range of metrics with results that

"differ at best and are incompatible at worst." In addition to being constrained by having blunt tools (and an imperfect understanding) with which to accurately quantify the benefits of conservation (an inevitability given the sheer complexity of ecosystem dynamics), potential mismatches between the scale of ecosystem processes and those at which governance institutions operate and have jurisdictional potency become problematic (e.g., Millennium Ecosystem Assessment, 2005). In short, there are 'spatial issues' that will need careful consideration and demand thoughtful pragmatic response given that precise spatial correlation between landowner actions and ecological outcomes (services) will in all likelihood be elusive. While some ecological processes are associated with a particular scale, others may occur across multiple scales. Such also raises questions of how services accrue to stakeholders at different institutional scales (ranging from community through the global). As underscored by Hein et al. (2006), the fact that ecosystem services are supplied at various spatial and temporal scales has a strong impact on the value that stakeholders attach to the services. As they intimate, this has interesting ramifications for establishing compensation payments – especially in light of the fact that such payments are most often envisioned as flowing landowner by landowner (a high level of resolution) when the evidence of ecological service enhancement may be spatially and temporally 'extended.' How might investments in ALUS, for instance, be either constrained or broadened by the cast of civic actors willing to support at various scales?

In a somewhat paradoxical turn, transparency in the verification of outcomes was at once appealing and evocative of sentiments suggesting the need to strike a delicate balance with concerns for confidentiality (particularly among program delivery professionals). Such was brought to light, for instance, in discussions of the EFP. There was overwhelming consensus in the case of the EFP that the benefits arising from 'erring' on the side of observing confidentiality (i.e., benefits in terms of garnering farmer trust and buy-in), might, in the final analysis, outweigh the potential harms in terms of the trade-offs in public transparency. As suggested by Wallace et al. (2008), in the end, careful response to the question 'What is being conserved by whom?' seems warranted in the interest of generating public goodwill and support for conservation, arguably never more so than under the public good lens.

As a final reflection related to the question of effectiveness, conversations inevitably turned to issues of permanence and enduring behavioural change. In a narrative reminiscent of Wilson and Hart (2000), for landowners and program professionals alike, effectiveness was perceived as inextricably caught up with (and shaped by) palpable shifts in behaviours: failure to bring about enduring shifts in behaviour inescapably resulting in failure to safeguard ecosystem services in

the long run. Enlightening from a policy perspective, the findings in this work suggest that approaches that foster a strong sense 'authorship' over and 'investedness' in project design and outcomes could enhance the prospects for bringing about enduring change, as suggested in the case of MFTIP (with intimations to the effect that landowners more actively and meaningfully engaged in the forest management planning development process are more likely to feel a sense of being invested in the outcomes). Such is reminiscent of Ostrom (2012) in her work on common-pool resources, which points to the importance of adaptive governance designs that give actors "a substantial voice in the design and monitoring of rules." And, while paying heed to Vanclay's cautionary note about not romanticizing the knowledge that farmers hold (here, taken to include woodlot owners), it would seem to behoove us to find avenues to respectfully and thoughtfully engage their lived experiences in deepening our understandings and worldviews.

3.6 Conclusion – Ecosystem Services Governance Prospects: Towards a New Social Compact?

> *". . . because the old rural-urban compact does not reward caring for the environment, it pitches the interests of a mostly urban conservation movement against the economic needs of the rural population. Add the income gap, and more and more the conservation enterprise resembles a group of rich urban people telling a group of poor rural people, 'You should not do this; you should do that…because we like it that way.' Clearly this will not work for either the environment, the conservation movement, or the rural population." (Gutman, 2007, p. 385)*

What, then, of the prospects for a governance framework that would serve to better recognize and foster the provisioning of ES by private rural landowners? Paralleling a strong undercurrent in the research at hand, it would seem that a new social compact, as advocated for by Gutman, might offer hopes for a rapprochement between rural and urban actors: a compact that embraces, at its core, a more equitable sharing of the responsibilities, burdens and risks associated with the enhanced provisioning of ES (though care is taken here in acknowledging that this study did not engage the perspectives of the urban populace). Certainly the notion of a shared model, in which all civil society actors are cast in a pivotal support role, resonated strongly with participants in this study. And yet, as reflected in the impassioned articulations of landowners (and echoed in the views shared by program and policy professionals), a disconnect exists wherein the masses are altogether disengaged from the realities of making a living from the land, and naïve (at best) in their grasp of the responsibilities and costs associated with stewarding the land. To this end, a 'rediscovery of the rural' was viewed as a precondition in garnering widespread civil society support for the provisioning of ES by private landowners.

Seemingly formative to such a renewed contract – an ethos of shared responsibility the centerpiece thereof – are the intertwined concepts of reconnection and relations of regard. While left for fuller treatment elsewhere, the body of scholarly work on alternative food networks may offer some thoughtful insights vis-à-vis these concepts and how they might help in "creating the demand" that Gutman views as a necessary building block in the realization of a social compact supportive of the sustainable provisioning of ES. Dowler et al. (2009), in conceptualizing opportunities for 'doing food differently,' explore how processes of reconnection lead to renewed social and ethical relationships between food system actors. They submit that processes of reconnecting people with "product, process and place" can be generative of an ethic of care. In pursuing this line of thinking further, they elaborate a set of 'interlocking cares' that operate on different scales from home through the wider community: care for local economies, environments and future generations; care for health and wholeness; and, care about transparency and integrity in food systems, including matters of science and governance. Notions of such interlocking cares are reminiscent in many ways of Wendell Berry (2012) in his thesis that, in the end, 'it all turns on affection.' While at once esoteric, there seems an equally compelling pragmatic underpinning: How might a deeper understanding of these interlocking cares (or affections) serve to open a keyhole in generating a more equitable sharing of the costs and responsibilities of providing and safeguarding ecosystem services? And, furthermore, what form(s) might the seemingly prerequisite processes of reconnection take?

While imaginative avenues for making meaningful points of reconnection will surely be needed, it seems that an eye to the substantive rather than the nostalgic will be critical. To this point, it is hoped that the research has offered a point of departure for dispelling the oftentimes romanticized notions of 'life down on the farm' (or woodlot, as the case may be) through the voices of those making rural livelihoods from a working landscape. It seems reasonable to assert that the processes of reconnection and rediscovery touched upon in brief here might serve as an opening for deepening appreciations of the lived experience of private landowners, and, so too, for lessening some of the apprehensions expressed in relation to civil society actors having a greater 'say' in prescribing actions on the farm or in the woodlot under an ES paradigm.

Is a compact in the imagining of Gutman within reach? As he himself concedes, its realization will not happen overnight, requiring instead "the spontaneous convergence of many different and independent initiatives, over the long run." And, as this research effort has served to illuminate, a singular way forward is elusive. Much will rest on an empathetic appeal to the motivations and interests of the private landowner community – a 'community' aptly described

by a program professional as a rather "amorphous" one. It is hoped that this work has been true to the pronounced variegation in perspectives, while offering insight in relation to some of the governance attributes of seemingly collective appeal in fostering the enhanced provisioning of ecosystem services. Much will rest, equally, on the willingness of civil society actors to contribute. Resolving some of the tensions highlighted throughout this paper may be our saving grace. It seems, in the end, that we can rest assured in this: we are likely to grapple in fostering the provisioning of ecosystem services if governance narratives do not embrace the notion of a shared responsibility for their provisioning.

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CHAPTER FOUR

Conceptualizing a Governance Framework for Fostering the Provisioning of Ecosystem Services: Angels in a Reflexive Architecture?

4.1 Abstract

Fueled by Costanza and colleagues' well known and somewhat controversial piece valuing the world's ecosystems at U.S. $18 trillion per year, a copious scholarship on ecosystem services (ES) has issued forth over the past decade. The scholarship wrestles in particular with philosophical and ideological points of contention spanning issues of 'duty of care' and the dangers of motivational crowding, and equally grapples with how the ES paradigm might serve to engender a bridging of the rural-urban disconnect. Escalating interest in the ES paradigm in the scholarly arena has been matched – perhaps even surpassed – in environmental policy and conservation practitioner circles. Considerable impetus has come from a private landowner community frustrated by heightened demands for environmental protection that fail to recognize the oftentimes significant outlays of capital, both human and financial, that are invested on the part of private landowners to deliver what is largely a public good. Such has prompted growing interest in how we might acknowledge and animate support for those who provide ecosystem services. While the scholarship is rich in its treatment of the many philosophical and ideological tensions, it has been less intensely engaged in exploring the practical strategies by which such support might be animated – a central interest in the research at hand.

This paper elaborates a set of high-order design features envisioned as important preconditions for building an effectual governance framework or 'architecture' for recognizing and fostering the provisioning of ecosystem services by private rural landowners. The narrative about the architecture is brought to life through the voices and lived experiences of private landowners and program and policy professionals in a regional setting (eastern Ontario), as actors who have much to lend to the discourse at hand. It is also shaped by the author's professional sensibilities spanning a two-decade career as a conservation practitioner. The paper contemplates the architecture through the lens of reflexive governance, with the hopes of inspiring thoughtful scholarly reflection on how approaches and strategies of reflexivity might serve to enhance the provisioning of ecosystem services. In exploring the prospects for reflexive governance approaches to foster the provisioning of ES, the research findings suggest reason for cautious optimism.

4.2 Introduction

> *"In theory, if we can help individuals and institutions to recognize the value of nature, then this should greatly increase investments in conservation, while at the same time fostering human well-being. In practice, however, we have not yet developed the scientific basis, nor the policy and finance mechanisms, for incorporating natural capital into resource- and land-use decisions on a large scale."*
>
> *(Daily et al., 2009, p. 21)*

In a grand entrance of sorts, a copious scholarship on ecosystem services has issued forth over the past decade. Fueled by Costanza and colleagues' well known and somewhat controversial piece valuing the world's ecosystems at U.S. $18 trillion per year (Costanza et al. 1997), scholars and conservation practitioners alike have been swept up in a groundswell of activity, captivated by what might be cast as a paradigmatic shift in the environmental policy realm. In a fundamental reconceptualization of society-nature relations (see Liverman, 2004), environmental amenities and qualities have been re-cast as capital assets, commodities or 'services' for trade. Faith in price signals and confidence in *homo economicus* form the foundational pillars for arguments that the private market holds promise (e.g., see Armsworth et al. 2007) for the governing and safeguarding of environmental resources.

Despite the mounting (indeed feverish) interest in the emerging ecosystem services (ES) paradigm, it has spawned provocative debate in scholarly circles on philosophical and ideological grounds. Debates rage over whether a price can be placed on nature's services, the mere employ of the word 'services' in relation to the natural world repugnant to some. [Harvard scholar Michael J. Sandel offers a provocative read on the moral limits of markets in his 2012 book *What Money Can't Buy*]. Detractors cite the impossibility of assigning a value, ethically and morally, to ecosystems that are viewed as having intrinsic worth. Sagoff (2002), a fervent critic, argues that the instrumental ethic to which many (even staunch environmentalists) have turned under the nascent paradigm is likely to be self-defeating in the end. He challenges:

> *"By relying on economic or instrumental arguments, environmentalists appear to join those who, according to Muir, 'instead of lifting their eyes to the God of the mountains, lift them to the almighty dollar.'" (p. 24)*

Roberston (2007), meanwhile, has difficulty giving credence to a central underpinning of the ES paradigm: that an appeal can be made to humans as rational, individualistic, self-serving beings.

He is adamant that "the stakes are high" in making assumptions on the basis of irrefutable rationality. Are human preferences not subject to the winds (and whims) of change, in many cases irrespective of economic considerations? In the eloquent words of Epstein (p. 261, 2003):

> *"Any celebration of rational behaviour and individual autonomy does not explain how people value goods and services."*

Other scholars have embraced the ES paradigm, arguing that ecosystems are implicitly assigned a value of zero if not considered in light of their economic worth – and are hence overlooked in policy decisions (Heal 2000; Bingham et al. 1995). In this way ecosystem services valuation is contextualized as an opportunity to assess trade-offs in a meaningful way, facilitating environmental decision making and policy development and evaluation. The promise of ecosystem services analyses for Daily et al. (2009) lies in their making explicit to the populace the costs and benefits of alternative courses of action. Others plead a similar case for the ES paradigm, highlighting the importance of being able to translate non-market values of the environment into financial incentives for the local actors who provide desired goods and services. Engel et al. (2008), for instance, note that payments for ecosystem services (PES) schemes may offer not only the opportunity to advance *environmental* objectives, but also broader human welfare objectives such as poverty reduction, regional development and livelihood diversification. This is a refrain consistent with Potter and Burney (2002), who frame a 'multifunctional agriculture' as one in which the production of food goes hand in glove with protecting ecosystem services, sustaining rural landscapes, generating employment, and contributing more broadly to the viability of rural areas. Wunder et al. (2008) are quick to caution, however, that a tipping of the scales too far in reaching for these latter objectives may in fact undermine the primary objective of ecosystem services provision, suggesting that the US Conservation Reserve Program, as a case in point, has fallen victim to politically-determined shifts favouring farmer-income support objectives over efficiency in actual ecosystem services delivery.

Escalating interest in the ES paradigm in the scholarly arena has been matched – perhaps even surpassed – in environmental policy and conservation practitioner circles. Considerable impetus has come from a private landowner community frustrated by heightened demands for environmental protection that fail to recognize the oftentimes significant outlays of capital (both human and financial) that are invested on the part of private landowners to deliver what is largely a public good. Such frustrations are reflected, for instance, in policy positions adopted by the Christian Farmers Federation of Ontario (CFFO 2010), and the Canadian Association of Forest Owners (CAFO, 2012) citing the unfair burden of responsibility falling upon the shoulders of

farmers and woodlot owners respectively. These, and like commentaries, have revealed a growing consensus among private landowners that all members of society ought to be playing a more central and *equitable* role in supporting the provisioning of ecosystem services (for Gutman, 2007, the realization of which demands a new social contract between rural and urban actors). Yet, by what mechanism(s) might this be achieved, and how might such responsibilities be shared? To what degree will society be willing to contribute or support? Under a 'public good' framing that has come to define the ES paradigm, this latter issue forms the crux of tensions emerging between those working the land and those looking on from beyond the farm (or woodlot) gate.

Setting aside these many philosophical and ideological frictions, what, then, of the prospects for transitioning the ES paradigm into a tangible, 'grounded' approach to environmental conservation? Otherwise stated, what are the possibilities for implementation? This forms the central interest in this paper. Returning briefly to the opening quote by Daily et al. (2009), while hopeful in tenor they at once remain circumspect about the scientific and institutional gaps currently constraining the systematic and widespread operationalization of an ES approach to resource decision making. The overarching aim of this paper is to contemplate the *practical* strategies (imperfect as they may be) by which we might acknowledge and animate public support for those who provide ecosystem services. On what terms might such strategies be devised, and in what ways might they be delivered? More specifically, the aim is to elaborate a set of high-order design features envisioned as important preconditions for building an effectual governance framework or 'architecture' for recognizing and fostering the provisioning of ES by private rural landowners. 'Effectual' meant here to imply an architecture that is well and equitably supported by civic actors, that harnesses in a sincere way the knowledge, imagination and ingenuity of private landowners, and that delivers unconditionally on the promise of enhancing the provisioning and protection of ecosystem services.

The paper contemplates such an architecture through the lens of reflexive governance, with the hopes of inspiring thoughtful scholarly reflection on how approaches and strategies of reflexivity might serve to enhance the provisioning of ecosystem services. Drawing on Gunningham (2012) and Wolff (2006), reflexive governance is interpreted here as encompassing a cluster of elements including participatory dialogue and deliberation, integrated knowledge production, devolved decision making, consensus building practices, inclusiveness, transparency, flexibility (in the place of uniformity and rigidity), and an embrace of adaptive management strategies (in the tradition of Holling, 1978), in which processes of iterative experimentation and

learning figure centrally. So, too, is reflexive governance interpreted here as invoking notions of compassion and cooperation, as taken up by Paul Hawken (2007) in his contemplative and hopeful manifesto *Blessed Unrest.* In exploring the prospects for reflexive governance approaches to foster the provisioning of ES, the research findings suggest reason for cautious optimism. The paper also offers a pragmatic point of departure for practitioners wrestling with the highly complex task of developing and delivering effective ES programs and policy.

4.3 'Framing' the Building of the Architecture: The Backdrop and Methodology

A brief sketch of the wider research effort is first offered as a means of contextualizing the genesis of the high-order design features in the architecture elaborated henceforth. The jumping off point for the research effort was the development of a heuristic framework for exploring governance alternatives for the provisioning of ES. The heuristic framework was developed as an aid to disentangling some of the inevitable 'messiness' that arises in the context of developing ES governance alternatives, and, further, to paint the diversity and richness of emerging ES approaches through a systematic examination of key characteristics that aid in differentiating them in terms of their likely viability. An extensive literature review entailing a wide-ranging sweep of both the scholarly and applied literatures (a high-level reconnaissance) was undertaken to identify from a structural and operational perspective the characteristics that serve a helpful role in assessing the likely viability or performance of a given ES approach. Reflection upon the many and varied approaches discussed in the literatures led to the subsequent development of 10 heuristic analytical fields that formed the centrepiece of the heuristic framework – an early overture (as the ES scholarship grows in exponential fashion) in systematically exploring some of the particularly critical issues that may influence the viability of ES governance alternatives.

Complementary to the development of the heuristic framework was an analysis devoted to exploring more explicitly the interests of those closest to the ground for different ES governance mechanisms. Through a series of focus groups across eastern Ontario the appetite for different ES governance mechanisms was explored from the point of view of private landowners, offering experiential 'views from the land,' as well as program and policy professionals (the latter actor group bringing a depth of experience in fashioning, delivering, and evaluating programs that seek to engage private landowners in conservation efforts). An array of ES (and ES-like) mechanisms and programs instituted around the world (including those emerging on the Canadian stage) were explored with both actor groups from the point of view of interest (i.e., appeal) and viability including: the Managed Forest Tax Incentive Program (Ontario); the Environmental Farm Plan

(EFP) program (Canada); Alternative Land Use Services or ALUS (Canada); the Forest Certification Program of the Eastern Ontario Model Forest (Canada); the Environmental Stewardship scheme (U.K.); EcoTender (Australia); a program of payments for bird habitat and watershed protection in the Los Negros Valley (Bolivia); and, the Pago por Servicios Ambientales (PSA) program (Costa Rica). The research also drew on insights stemming from in-depth interviews with informants possessing ES expertise spanning regional, provincial, national and international policy contexts. Perspectives from these informants were sought out in the interest of developing a deeper appreciation for the current political climate and direction for ES programming and policy in Canada, and how such might bring to bear on the design of an ES governance framework in the local context.

The design elements elaborated herein, and the collective architecture they represent is thus informed out of the heuristic framework developed at an earlier stage of the research, and, moreover, by the empirical insights stemming from the conversations with landowners and program and policy professionals vis-a-vis the appeal and viability of various mechanisms. The value-added offered in this paper is in extracting (from this previous body of work) a set of high-order design features presented as preconditions in developing an effectual ES governance architecture for fostering the provisioning of ES. The narrative forthwith is, in significant measure, told through the direct words and lived experiences of the study participants. In offering imaginings of the high-order design elements and the resulting framework, the narrative also reflects the author's own subsequent interpretations, articulations and renderings, arrived at through the meticulous distillation of data recorded in transcriptions, and (unabashedly) shaped by professional sensibilities spanning a two-decade career as a conservation practitioner.

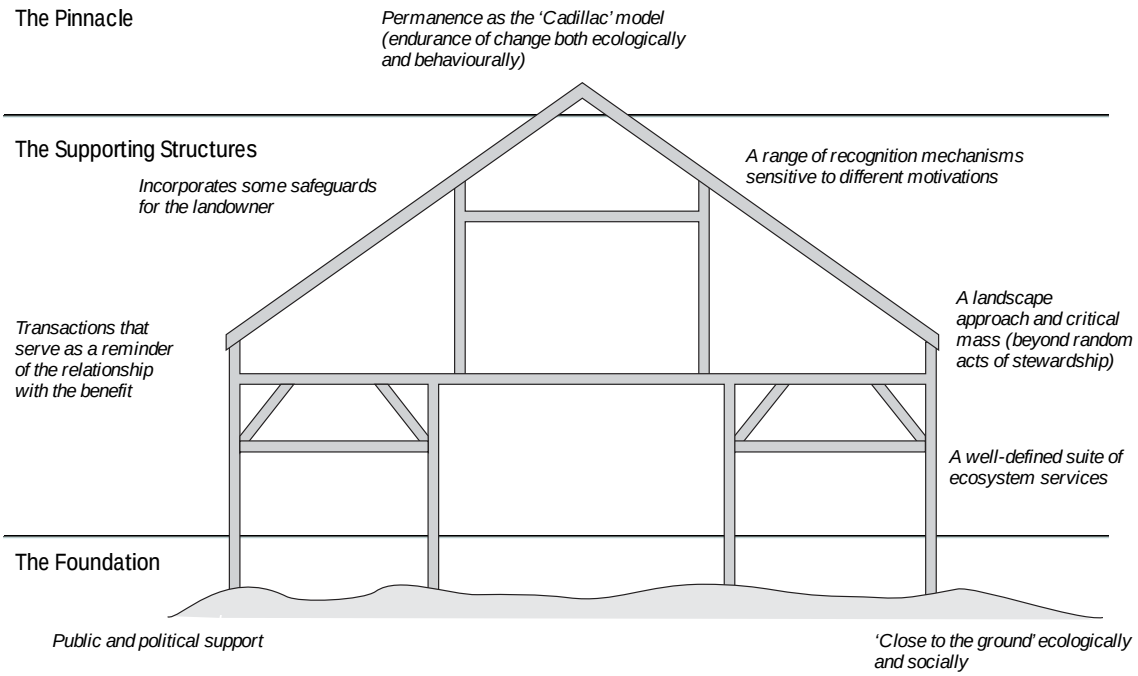
Before turning to the architecture, why the express interest in *reflexive* governance? Brousseau et al. (2012) join a chorus of others in asserting that reflexive governance represents "a promising field of research . . . in [the] new governance landscape (p.15)." In embracing a "recursive mutual contingency of subjective representations and interventions" (Stirling, 2006, p.229), reflexivity acknowledges that societal change results from a "multiplicity of distributed efforts shaping it" (Voβ and Bornemann, 2011, p. 9). At the heart of reflexive governance are processes of participatory deliberation, collective learning and iterative experimentation – all of which seemingly warrant thoughtful reflection in building a governance architecture that fundamentally engages the matter of how *all* members of society might be implicated in a more equitable sharing of the costs and responsibilities associated with the provisioning of ecosystem services.

4.4 High-Order Design Features for a Governance Framework for Fostering the Provisioning of Ecosystem Services: Angels in a Reflexive Architecture?

> *"If you have built castles in the air, your work need not be lost; that is where they should be. Now put the foundations under them."*
>
> *(Henry David Thoreau, Walden, 1854)*

What robust elements of DNA-type constitution might, then, be visible in a governance framework for recognizing and fostering the provisioning of ecosystem services? In adopting the metaphor of an architecture, the discussion of what are henceforth referred to as 'high-order' design features is organized by: The Foundation, The Supporting Structures, and The Pinnacle or Capstone. In discussing each of these design features, the author contemplates the value that reflexive strategies and approaches might lend, as well as the cautionary notes that might be heeded per the more tentative voices in the scholarship. The architecture, imagined as a structural whole, is presented in Figure 4.1 below.

Figure 4.1: High-order design features in a conceptual framework for fostering the provisioning of ecosystem services



4.4.1 The Foundation

4.4.1.1 Public and Political Support

> *"We can all sink or we all float*
> *'cause we're all in the same big boat."*
>
> *Sting, One World (Not Three), 1981*

In a storyline that was reprised throughout the course of the field work with landowners and program and policy professionals, the need to animate and secure public and political support for the provisioning of ES was cast as pressing. The prevailing sentiment (decisively so) was that the fundamental societal awareness needed to generate such support was overwhelmingly absent. A much more deeply-developed awareness about the nature and importance of ecosystem services in the context of human well-being was deemed a pre-cursor to precipitating the sort of societal awakening viewed as necessary in garnering widespread support for the provisioning of ES by private landowners. The sense that a 'mainstreaming' of the conversation about ecosystem services has proven thus far elusive was captured frankly in the words of a program delivery professional:

> *"If you went out and talked to the average Joe down the road, he would say, 'ecological what?!?' I don't know that they [members of society at large] have caught up to the conversation we're having here today. You need to sell this whole thing to them before they're going to realize that it's important."*

For many, the matter of 'saleability' reliant on finding messaging that resonates with the masses – masses characterized by study participants as altogether removed from working rural landscapes and naïve in so far as the realities of work-a-day life are concerned.

Enter the idea of a 're-discovery of the rural.' In conveying the essence of this 're-discovery,' landowners spoke emphatically and passionately of the need to reconnect people to the land, to the working rural landscapes that produce the many ecological amenities that civil society actors derive benefit from or 'consume' in one way or another (of note, program and policy professionals shared an analogous view). What is it that landowners do on such working landscapes? Why is stewardship so important, and what does it entail in practical terms? Why invest in stewardship as a civic actor? In probing the practical avenues for effecting such a process of re-discovery, a number of imaginative ideas took form; these ranged from developing

TV adverts showcasing the significance of stewardship efforts undertaken by private landowners emulating the well-known and long-airing 'Canada Heritage Minutes,' through bringing landowner experiences to the classroom (including the development of curriculum support materials), and offering learning and mentoring experiences on the farm and in the woodlot. As with Kirschenmann (2010), the notion of creating opportunities for 'intimacy' figured prominently. The ways to such 'intimate' and self-reflexive learning seemingly cast much in the mould of John Burroughs (1912) in his renowned *Time and Change*:

> *"To absorb a thing is better than to learn it, and we absorb what we enjoy. We learn things at school; we absorb them in the fields and woods."*

In what seems an encouraging trend to this end, examples that serve as inspiration continue to emerge. In New York, a collaborative effort has given life to Stone Barns, which functions as farm, restaurant and classroom. Wright (2006) documents in convincing fashion the value of 'community as classroom' in teaching the concept of civic agriculture to students. In a growing movement, both at home as well as further afield, 'farm to table' initiatives are emerging (in significant number) with the aim of connecting consumers and producers in more meaningful and intimate ways. Safina (2008), in a call hinting of a reflexive underpinning, underscores the importance of communicating through value-based channels of understanding, among these story and personal experience – an idea that resonated strongly among landowners in the research at hand. In the end, as Safina suggests, much may rest on building "new audiences outside the choir" in seeking enhanced commitments to (and compassion for) the conservation cause.

Consistent with the idea of needing to reach audiences 'beyond the choir,' the importance of partnerships and a shared governance model emerged as a distinctive thread in this research. There was strong convergence around the notion that a coming together of public, private and civic actors was necessary (and, notably, that a narrow focus on government support was likely to be unproductive), pointing to a governance model in which no one interest was left holding the proverbial bag, and in which responsibilities, costs and risks would be shared. This vision of a shared governance model encapsulated in the words of a farmer:

> *"I think the approach is that it has to be shared – a shared responsibility, a shared cost. There's going to be a cost; let's share that cost. As part of that sharing, you have the farmer, the agricultural community, and the consumer. We're looking at a shared model."*

Among landowners and program and policy professionals alike, the notion of diversifying sources of support and looking beyond "the usual suspects" was emphasized – a narrative reminiscent of Fish (2011) in his call for the need to move beyond 'ready-made communities of interest' in garnering support. Notable in this research was the openness expressed among landowners to engage in partnerships spanning public, private and civic spheres (including those that might be characterized as welcoming such 'unlikely bedfellows'). Looking to fellow focus group participants for affirmation (and receiving it in spades), one woodlot owner remarked:

> *"And we're willing to partner. I think all of us here are willing to partner if there's a common goal."*

A concomitant openness to deliberative, participatory processes in seeking out ways to pursue that "common goal" was prevalent among landowners in this study, though care is taken here not to diminish the strong sensibilities alluded to formerly with respect to what landowners perceived as a gaping disconnect from the working rural landscape, or to play down the tensions surrounding questions of equitability. In this vein, the cautionary note issued by Poncelet (2001) in reflecting on the proclivity toward conflict minimization and non-confrontational behaviour in participatory processes is well-heeded:

> *"These partnerships are ultimately constrained by the very discourses and practices they tend to privilege. What they forfeit in the process are the potentially transformative, and, indeed, revolutionary ideas harboured by individuals and organizations for whom environmental cooperation based upon 'a kiss here and a kiss there' is not sufficient." (p. 23)*

As he suggests, in relegating conflict to the sidelines we may inadvertently risk 'engendering a retreat from radical thinking,' quashing processes of innovative (and truly deliberative) environmental problem solving. *Authentic* partnerships will necessarily need to move beyond 'a kiss here and a kiss there' (see also Kramarz, 2013, on the 'substantive promise of partnerships').

What, then, of the prospects for animating this foundational public and political support? Wendell Berry (2012), in his introspective essay *Starting from Loss*, finds particular hope and promise in what he refers to as leadership from the bottom, "a coming together of individuals and local groups, who, without official permission or support or knowledge, are seeing what needs to be done and are doing it (p.87)." Such was echoed in the course of conversations with study participants, many pointing to the appeal (and perceived successes) of governance models in

which a bottom-up dimension was clearly discernable. Hawken (2007), too, sees hope in a swelling social movement that has witnessed the emergence of millions of grassroots organizations in what he describes as a 'state of blessed unrest.' Might this state of blessed unrest represent the beginnings of a spiritual awakening that could serve to secure enhanced investments in the provisioning of ES? While such remains to be seen, an important nuance (that Berry himself draws attention to in an interview with Jim Leach, Chairman of the National Endowment for the Humanities) makes a compelling entrance in this work: that leadership from the bottom *in concert with* government (and a diverse range of others) may offer the most productive way forward. A segment of Berry's exchange with Leach is illuminative in this regard:

> Leach – *"Well the minimal definition of socialism is government ownership of the means of production. And you certainly favour local ownership, family ownership, of the land. And then you have a wonderful quote on government: 'I never think of it without the wish that it might become wiser and truer and smaller than it is.'"*
>
> Berry – *"I would still say that. But that's not a repudiation of government, for which there are authentic needs and uses. What intrudes into this argument, and makes it maybe eccentric for the time, is that the issue of scale, to me, is paramount. The measure of ecological health, closely related to the question of scale, is paramount. And I think the two great systems of capitalism and socialism have ignored both the propriety of scale and the standard of ecological health. Both are industrial systems, and they have made the same mistakes in some ways. It might be possible, on the contrary, to think of government as rising from the needs of land and people rather than descending upon them from some master idea of economics or politics."*

In a tangible example of such "authentic needs and uses" for government, a petitioning of sorts by participants across several focus groups underscored the need for a legislative framework recognizing the significance of ecosystem services – as an important lever in crystallizing public and political support.

4.4.1.2 'Closeness to the Ground' Ecologically and Socially

> *"If resilience represents the sustaining foundation for ecosystems, then useful and useable knowledge and the social trust to apply that knowledge represent the sustaining foundations for social development."*
>
> *(Holling, 1996, p. 735)*

In reflecting on the structural bones of the architecture, and, in particular, what might be considered central support beams, it is tendered that a 'closeness to the ground' in both ecological

and social senses is of the essence. In ecological terms, the integrity of the architecture depends on the demonstrability and defensibility of the outcomes (i.e., the tangible, gaugeable ecological enhancements). The pivotal need for outcomes-based evidence against a backdrop of ecological complexity and finite implementation/delivery resources was underscored by program and policy professionals in the study, and, likewise, acknowledged by landowners. Conversations pointed to the importance of developing credible, science-based performance measures and tools in making a compelling "business case" to secure civil society investments in conservation. Ecological indices and modelling tools (such as those employed in Australia's EcoTender program) piqued interest among participants, suggesting an openness to their development and application in the local context. A view to ensuring that such performance measures are adapted to or responsive to local conditions (that they are 'close to the ground,' as it were) seems axiomatic. In equal measure, an attentiveness to landscape level effects (and associated metrics) is surely requisite, a discussion developed later in the paper (see also Rickenbach et al. 2011 for a thoughtful piece on cross-boundary, multi-scalar management in the context of sustaining ES from private lands).

On the social side of the equation, the notion of a 'closeness to the ground' registered in appeals for ensuring the "right delivery people" (agents) are embedded in the institutional structure(s) adopted. 'Right' in the context of this research tended to emphasize delivery by organizations or entities with grassroots leanings (i.e., those exhibiting a bottom-up dimension), and those with established credibility within the community – and, moreover, pointed to exemplars in which personal relationships generative of mutual trust and understanding figured strongly. As framed in the candid words of a farmer:

> *"Am I dealing with an honest person or somebody who is going to screw me in one fashion or another? That is such an important dimension of the process."*

Such accords convincingly with Folke et al. (2005) in their submission that:

> *"Trust makes social life predictable, it creates a sense of community, and it makes it easier for people to work together." (p. 451)*

For Grin (2006), a hopeful opening is taking form as institutions of 'first' or 'simple modernity' (e.g., parliaments, agricultural research centres, farmers' organizations) are increasingly complemented by institutions of reflexive modernity, among these model projects, participatory agreements, stakeholder bodies, and transdisciplinary advisory boards. Beyond embracing "the plurality of actors' logic," it is argued here that such reflexive

institutions might also invite a deepening of the foundations of trust and mutual regard that seem so central to the success of efforts aimed at fostering the provisioning of ES.

In a related vein on the social dimension, the 'closeness to the ground' concept found expression in passionate entreaties on the part of landowners to adopt modes of delivery that embrace their knowledge and lived experiences. Muradian and Rival (2013) echo this in advocating for the integration of local traditions and knowledge systems in the governance of ecosystem services. Extending these ideas outward, and taking up a line of thinking ubiquitous among program professionals in the study, much rests on the nature of the 'approach' to the landowner. As expressed by one participant:

> *"So much has to do with the approach you take with landowners. It's the initial approach of collaboration, the appeal to their expertise and contribution, but then it's also an* engagement [original emphasis]*."*

In pursuing the 'social development' underscored in Holling's opening quote, the *meaningful* engagement of landowners will be paramount. As Bowen and De Master (2014) propose in reflecting on the incorporation of producer voices and visions:

> *". . . a more reflexive approach involves* deepening and diversifying [original emphasis] *the discourse around local food system alternatives in ways that give more careful attention to the places where food is produced." (p. 550)*

The findings in this study suggest that an analogous deepening and diversifying of the discourse around ecosystem services more broadly (i.e., extending beyond foodstuffs) would be welcomed among farmers and woodlot owners alike.

4.4.2 The Supporting Structures

4.4.2.1 Transactions that Serve as a Reminder of the Relationship with the Benefit

> *"There are two spiritual dangers in not owning a farm. One is the danger of supposing that breakfast comes from the grocery, and the other that heat comes from the furnace."*
>
> *(Leo Aldopold, A Sand County Almanac, 1949)*

A thought-provoking idea that emerged during the course of the research is that transactions involving ecosystem services must be rooted in, or serve as a reminder of, the relationship with the benefit. Otherwise put, it is important that the benefits associated with any transfer between

ES provider and beneficiary are somehow visible or 'relatable.' As captured in the words of a policy professional:

> *"There needs to be visible evidence of a transfer if in fact we're going to have a transfer. So, if I sell something to John Doe, he gives me the money or writes me a cheque and I've got tangible evidence that he and I had a mutual benefit. There are lots of tools [approaches] you could imagine where you basically just say, 'Let's reduce the taxes (the Managed Forest Tax Incentive Program for example),' but I think people kind of lose the idea that there is a benefit transfer."*

And reaffirmed in the words of a woodlot owner:

> *"The public has a very general approach to the notion of supporting efforts to care for the environment. All they know is, 'Gee, it's too bad the environment is in jeopardy and I'd like to help in some way.' So, what do they do? They give money to an environmental organization. What do they do? Well, they advocate, they go out and they raise funds, they do this and that, but they certainly are not in the business of making sure that individual landowners are compensated or recognized for the value of the [ecological] services they provide. That's not what the public is doing when they're thinking good thoughts about the environment and giving money. There's no connection. How in the heck do we make that connection?"*

How might this fundamental disconnect be bridged? How might the 'vagueness' in the relationship between the transactions and benefits accruing to civil society actors be made less so? It would seem the scholarship on alternative food networks has insight to lend, particularly with respect to the concepts of social embeddedness and relations of regard. As conceptualized in this body of scholarship, social embeddedness conveys principles of social connectivity, reciprocity and trust, with personal relationships between producer and consumer taking centre stage. Sage (2003), in exploring an alternative food network in south-west Ireland, presents a compelling case for the significance of mutual regard as a non-economic dimension of personal relationships between producers, consumers and others. As he explains in simple terms:

> *"In short the ability to construct value and meaning from the product establishes the basis for a relationship of regard."*

While cautioning against the impulse to take an "overly sentimental view of face-to-face interaction," he argues that we adopt a 'perilous' stance in dismissing the value and importance of non-monetary rewards, wherein personal acknowledgement of trust and expertise is a "powerful reward in its own right."

Related notions of 'intimacy' and trust are taken up by Kirschenmann (2010), who sees promise in new opportunities to market food as a story – a story in which farmers are integrally cast. As he submits in a witty play on words:

"*In today's market, the pig's tale may become at least as important as the pig's tail."*

Undercurrents in this research pointing to the disconnect of the populace from rural working landscapes suggest that pursuing more aggressively opportunities to share the 'pig's tale' may represent a productive way forward in making more relatable the benefits deriving from ecosystem services transactions. Likewise, emerging traceability tools, such as ThisFish developed by EcoTrust Canada and partners (see Cuthbert, 2014), may offer a promising means of empowering consumers while rewarding producers who embrace sustainable practices – again, playing to the intimacy of the food experience. Arguably, one of the greatest challenges may come in the form of narrating a compelling story in relation to those ecosystem services that extend beyond foodstuffs (as a relatively narrow set of 'provisioning' types of services). As Kirschenmann circumspectly points out, we tend to be vested in food in a unique way, passionately involved in food issues; this is a privileged position that other commodities or types of ecosystem services may not enjoy.

4.4.2.2 A Landscape Approach, Critical Mass and Considerations of Scale

Building further on the supporting structures conceived as vital to the architecture, a landscape approach and critical mass figure strongly. Adopting a landscape approach (taken here to mean a holistic perspective that recognizes the interconnectedness of ecosystems) is viewed as necessary in fostering the widespread provisioning of ecosystem services given that ecological processes and functions transcend administrative boundaries. Inevitably, actions taken on a given parcel of land effect some measure of change on adjacent or neighbouring parcels. To this end, it might be argued that we do ourselves a disservice in treating individual landholdings as discrete parcels; rather, they are part of an interconnected whole. Such points to the importance of generating critical mass and moving beyond 'random acts of stewardship,' the essence of these ideas captured in an exchange between program professionals (pseudonyms are adopted below):

Lane - "Large-scale. It can't be a few farms and properties here and there. To be effective it has to have impact. And to have impact it has to be big.

Ava – Kind of like a landscape level impact.

Lane – Right! It also has to be doing the right things in the right places. For instance, if you have a pile of wetlands in and around Gananoque do you really want to add a few more wetlands, or do you want to do something else? It's targeting the landscape and also targeting what you're doing – the result."

The notion of spatial targeting that emerges in the latter part of the exchange raises some interesting questions in its own right. How might spatially-targeted efforts be perceived (and received) by landowners on equity and fairness grounds? While the research at hand only afforded the opportunity to delve into this in a surficial way, in exploring the U.K.'s Environmental Stewardship scheme there was notable appeal for the employ of target areas in conjunction with target themes as a way of enhancing inclusivity, opening participation to a broader complement of participants while still preserving an attentiveness to spatially-targeted conservation.

Returning briefly to an earlier point, the spatial configuration of landowner participation on ensuing ecological outcomes points to the importance of galvanizing cooperation on scales larger than the individual property (e.g., see Kittredge, 2005). In contemplating the practical tools that might serve to enhance cooperation of this nature, the agglomeration bonus seemingly offers promise (see Parkhurst et al. 2002 for a fulsome discussion; and also Goldman 2007 on 'cooperation bonuses'). Given the cooperative ethos that was vividly observed in the research context at hand, such bonuses may be particularly valuable in occasioning return on investment in an ecological sense – and, arguably, in a social sense as well through the fostering of opportunities for social learning. The social capital built by investing in social relationships in turn reflected in investments that serve to safeguard natural capital (see, for instance, Folke et al. 2005, and Knowler and Bradshaw, 2007).

An intriguing question that emerged in discussing the embrace of a landscape approach was whether it might be possible for the flow of benefits to move around on the landscape. Rather than the benefits being 'static' to a particular property or location in perpetuity, might it be possible to maintain an overall goal or target (e.g., 30 per cent forest cover) across the broader landscape (e.g., through projects x, y, and z). As a program professional mused among colleagues:

"I keep wondering about the idea of having this stuff move around over the landscape. Rather than keep every single acre in every single spot permanently some things could lend themselves, in theory, to moving around. Like bobolink habitat is a good example. It's grassland, it's mowed, and so forth. It doesn't take a long time period to create it

> *somewhere. So, in other words, you kind of take a landscape level approach rather than a singular point approach. What percentage of lake or stream do you need to have protected, for example, for good temperature regulation for fisheries habitat? In theory it could be this segment for ten years, but meanwhile there's another chunk that has maturing forest over it, so that will kick in and be a benefit for the next ten years. And maybe this segment goes through maintenance or could be cut . . . the ecosystem is pretty dynamic and things can move around. So could this be part of our thinking?*

Such a proposal seemingly harkens to the importance of embracing adaptive management as a strategy of reflexive governance (as championed by Holling 2001). Extending the notion of a flow of *ecological* benefits, discussion arose across several focus groups in relation to whether a flow of *equity* might, too, be possible in fostering the provisioning of ecosystem services. Could there be a transfer of equity from those landowners that are providing benefits (services) above a certain threshold, likewise creating a flow of ecological benefits over the broader landscape? It is intimated that both former and latter represent lines of inquiry deserving of further contemplation.

As a final reflection on the notion of a landscape approach vis-à-vis the provisioning of ecosystem services, considerations of scale seem to emerge as paramount. Harkening back to earlier discussion of the inherent disconnect between those working the land and the populace at large, Berry (2012, p. 31) asserts:

> *"[The] effort to connect cities with their surrounding rural landscapes rests exactly upon the recognition of human limits and the necessity of human scale. Its purpose, to the extent possible, is to bring producers and consumers, causes and effects, back within the bounds of neighbourhood, which is to say the effective reach of imagination, sympathy, affection, and all else – including enough food – that neighbourhood implies."*

Berry's notion of a requisite return to the 'bounds of neighbourhood' was echoed loudly among participants in the research, and, while convincing indeed (see also Marsden, 2013, who makes an appeal for place-based forms of reflexive governance), may call for a delicate balancing with a consideration underscored by Muradian and Rival (2013): that the beneficiaries of locally-supplied ecosystem services might be in distant locations and often belong to different social groups thereby necessitating governance systems that "transcend the local realm," encompassing even the global. The tensions highlighted here defy straight-forward resolution, and, rather, draw attention to the need for thoughtfully contemplating the interplay between (and intermingling of) various scales in conceptualizing ES governance alternatives.

4.4.2.3 Safeguards for the Landowner

In the course of exploring questions related to the nature of commitments that private landowners would be willing to subscribe to under an ES program or contractual arrangement, a principal storyline emerged vis-à-vis the importance of incorporating safeguards for the landowner. In taking what many landowners viewed as a 'leap of faith' of sorts (whether providing ES under a one-year, five-year, or ten-year arrangement), such safeguards were viewed as necessary to imbue confidence among participating landowners that assurances are in place to protect them in cases where failing to meet long-term commitments is, for all intents and purposes, outside of their control (e.g., the devastation of the 1998 ice storm still vividly-etched in the memories of many; and, the more recent arrival in southern Ontario of the voracious emerald ash borer also foremost in the minds of many). 'Safe harbour' arrangements being implemented and trialed in other jurisdictions, notably in the context of species at risk conservation efforts (e.g., see Bean et al. 2001 on safe harbour agreements in the U.S. context), were most commonly cited as having appeal in this regard. [Of note, since the completion of the research proper certain safe harbour types of provisions have been developed under Ontario's Endangered Species Act; see Ferrier 2009]. In minimizing the risk and uncertainty absorbed by the landowner, such safeguards might be expected to enhance the provisioning of ES by private landowners. Here again, the principles of adaptive management seemingly hove into view.

The brief foray down the preceding road almost inevitably begs the question, 'What, though, of reciprocal obligations?' Under the public good lens, considerations of 'safeguards' for civil society actors who lend their backing to the provisioning of ES become a point of interest equally. In a 2015 report that explores Ontario agriculture's social contract with civic actors, author Jim Wheeler challenges the Ontario farm community to be truly introspective in contemplating whether that social contract is being fulfilled. He makes the case that while historically Ontario farmers have been held in high regard by the public and consumers, recent developments (as epitomized in the Walkerton disaster, for instance) have "threatened that faith." In seeking to renew that faith he issues a further challenge to Ontario's farm community: to position itself to address the challenges "that the agricultural sector and society face, *together* [emphasis added]." The latter point underscores arguments presented earlier in support of a shared model in fostering the provisioning of ES – one in which reciprocal obligations and relations of regard figure prominently.

4.4.2.4 A Well-defined Suite of Ecosystem Services

Emerging somewhat organically out of conversations about the vast and complex array ecosystem services, and how those might come to be defined or delineated in an ES governance framework, was the intimation that there might be merit in having a relatively narrow set or suite of ES that would be remunerated for or the provision of which would be recognized in some manner. Those on the 'inclusion list' would need to be well-defined (to the extent that ecosystem services can be 'well-defined,' or even legitimately compartmentalized as component services – e.g., see Norgaard and Bode, 1998, for a thoughtful treatment of the latter issue), and justified on the basis of our ability to actually quantify or do the ecological accounting (the complexity of that task not lost on the participants in the study). While these matters remain uncomplicated in their resolution, ES scholars continue to explore possible inroads. Naeem et al. (2015), in their appeal to 'Get the science right when paying for nature's services,' offer a set of natural science principles and guidelines for payments for ecosystem services interventions. Their call for a more "inclusive process in developing, testing and refining basic science principles" is compelling (the reflexive underpinning palpable), and, perhaps most hopeful is the very coming together of such a diverse cadre of scientists and practitioners (spanning government, non-government, academia and finance institutions) in grappling with these challenging issues.

4.4.2.5 A Range of Recognition Mechanisms Sensitive to Different Motivations

Compelling in this research was the storyline suggesting the need for a greater sensibility to the wide-ranging motivations that incent or inspire stewardship and the provisioning of ES in developing and implementing appropriate recognition mechanisms. In the course of exploring recognition mechanisms running the gamut of something as understated as a handshake and being presented with a certificate of recognition at a community event, through recognition in the marketplace, through various other forms of rewards and remuneration spanning tax incentives, in-kind payments and monetary payments, a diverse 'appetite' was uncovered – with the intimation here that those developing programs and policies aimed at fostering the provisioning of ES will need to be keenly attuned to this diversity. As suggested by a landowner participant, a multiplicity of forms of recognition or supports will be required to engage the broadest possible complement of landowners:

> *"I don't think it's any one thing [form of recognition]. I think it's the proper 'many of things' . . . you might have different things for a farmer, for a person actively managing their woodlot, for a person who simply wants to maintain natural areas and enhance*

wildlife habitat - a whole variety of different things to try and pull as many people in as possible. It's all about creating critical mass if you want to be successful."

The research yielded some particularly intriguing insights in relation to the complex nature of motivations eliciting stewardship and the provisioning of ES. First, emerging from the research is a narrative about motivations evolving through time. As brought to life in the words of a woodlot owner:

"*My initial motivation was looking for a place to hunt in Precambrian Shield country, which I had come to love as a youngster. After having owned the property for a while, I discovered that it was not just of interest to me, but of interest to a whole lot of other people, some for hunting, some for birdwatching, et cetera. I came to realize there was a lot more to ownership than the value derived from it. And over the years, I think that element has probably grown even stronger . . . over the years I did some trapping and that showed me some insights into things that happen under the ice in wintertime and then discovered through that process that I could attract eagles onto the property. . . Herons taught me a few things in the spring . . . So all these things have contributed to my understanding of the workings that go on in the landscape. I've developed a slightly deeper understanding of the day-to-day events and what they mean over several years of watching. So, for me, hunting was the [motivational] trigger, but the natural world is the thing that captures me now."*

Such is reminiscent of Vanclay (2004) in his assertion that adoption is not a discrete, one-time affair, but rather a process of reflexive contemplation and re-assessment. In treating motivations as static and unmovable persuasions, something is lost. Second, though manifesting more subtly, is the insight that empathy-conditioned motivations may be of import in shaping conservation decisions. Sharing strong parallels with the work by Sheeder and Lynne (2011), the findings in this study support the notion that 'shared other interests' based on empathy-sympathy responses (interests that transcend the realm of the self-interested, and financially-motivated) may be at play, as manifest, for instance, in an unmistakable "sense of obligation to others" evidenced in exploring the experiences of landowners in a group forest certification model administered and delivered by a local not-for-profit. Third, and finally, is the intimation that a more complex dynamic may be at play than invoked in the traditional binary of the intrinsic versus the extrinsic in scholarly debate. The words of a woodlot owner illustrating this elegantly:

"My motivation relative to my woodlot is a bit more poetic, lyric, contemplative than other things because when I walk in the woods it transports me elsewhere. By contrast, in the aftermath of the ice storm [in 1998] I thought to myself, 'Ouf, it's going to be difficult to create that poetic, lyric experience of my woodlot.' In other words, to continue to make that poetry, it will require that I have something monetary to support. Otherwise it will be difficult to live strictly on the poetry of the thing."

That motivations of a genuinely intrinsic nature may co-exist alongside those exhibiting extrinsic tendencies is provocative from a policy development perspective, calling attention to the imperative of thoughtfully contemplating such nuances in developing policy mechanisms supportive of the provisioning of ES.

As a footnote on the range of recognition mechanisms that might be instituted, while evoking an undeniable appeal among many study participants, direct payment (hard cash, as it were) was widely acknowledged as only one form of recognition on a continuum – and, for many, viewed as unlikely to be tractable (certainly in the current political climate) on any scale of significance (pointing, by way of example, to the non-trivial challenges that would need to be surmounted in a provincial application of the Alternative Land Use Services approach). That payment might form part of a *richer range* of recognition mechanisms seems reasonable to suggest (notwithstanding the difficulties in landing upon the appropriate algorithms for discerning when payments might be warranted).

4.4.3 The Pinnacle or Capstone

4.4.3.1 Permanence as the 'Cadillac' Model

'Permanence' as treated in this architecture relates to the endurance of ecological enhancements, and, equally, the endurance of change in behaviours supportive of the provisioning of ecosystem services. In the final analysis, absent either of these conditions (even with the forgoing foundational and supporting structures in place) the architecture inevitably gives way to collapse, for they are inextricably linked in a fundamental way: absent enduring behavioural changes, we are left without much prospect in so far as enduring ecological enhancements are concerned. The permanence of the latter at least *in part* a function of the former (this notwithstanding the fact that the sheer complexity of ecosystem dynamics constrains our ability to predict with certainty the change responses that might occur, particularly over long timeframes).

These intertwined notions of permanence were captured compellingly in the words of a program professional in his framing of a governance framework for fostering the provisioning of ecosystem services:

> *"To be totally effective it has to be permanent. The Cadillac model is the one where it creates permanency . . . where we have lots of landowner involvement, and there's ownership in it. In the end, what we really want is that buffer strip there when we're all pushin' up daisies!"*

The heartfelt and, at times, emotionally-charged appeals of landowners echoed the importance of being made to feel truly part of the conservation 'enterprise,' that they be engaged in a meaningful way, and valued for the knowledge and lived experiences they offer in finding potential solutions (a sense, in a manner of speaking, of being something more than 'just another cog in the wheel'). Likewise, expressions of needing to feel a sense of authorship over project aims and design were pervasive among landowners, with the implication that prospects for permanence would be best served by projects or programs that foster a sense of 'investedness.' Cue reflexive governance? Following Pretty and Ward (2001), that such investedness might be more readily borne out of "relations of trust, reciprocity, common rules, norms and connectedness in institutions" seems a safe wager.

Returning briefly to an earlier point, the inherent complexity of ecosystems and the unpredictability of long-term change responses also seemingly point to the importance of embracing adaptive management approaches, as a strategy of reflexive governance. As Holling (1996) submits:

> *"Flexible institutions are ones where signals of change are detected and reacted to as self-correcting processes and where knowledge and understanding accumulate – in short, where learning is possible in a changing world." (p. 735)*

The embrace of such processes of adaptive learning seems requisite in light of the innate 'unknowability' of our infinitely changing ecosphere. What might be tending towards 'permanency' (Holling might prefer the term 'resiliency') at one point in time might look quite different at another point in time. Permanency, in others words, musn't be treated as a well-defined and static end point (either in ecological or *behavioural* terms, as argued earlier in the context of motivations being re-shaped through processes of self-reflexive contemplation) – hence the seeming value of a reflexive approach. And, in reflecting on the question of permanency writ large, the importance of embracing policy timeframes that accommodate the thorough investigation, delivery and evaluation of ES approaches seemingly looms large. Enter adaptive management, once again. While gaining attention in the scholarship, the extent to which ecological and social outcomes are empirically evaluated in terms of the impact of conservation and ES policies remains imperfect at best (as suggested in a growing

chorus to that end – see Ferraro and Pattanayak, 2006, and also Snyder-Bennear and Coglianese, 2005, on the need for a renewed commitment to program evaluation).

4.5 Conclusion

> *"Yet getting reflexive governance right will be critical. It is, in part, a movement into the unknown, filled with trepidation but also with hope, bolstered by an awareness of our own limitations, a humility that we must learn to use as an asset."*
>
> *(Goffman, 2007, p. 70)*

This paper has been principally preoccupied with the elaboration of a suite of high-order design features envisioned as requisites or 'conditions for success' in building an effectual governance architecture for recognizing and fostering the provisioning of ecosystem services by private landowners. The narrative about the framework has been brought to life through the voices and lived experiences of private landowners and program and policy professionals, as actors who have much to lend to the discourse at hand. It is also shaped by the author's sensibilities as a conservation practitioner. To reprise in brief, the architecture imagined here espouses as critical eight high-order design elements as follows:

- *Public and political support* – the animation of which is argued to demand a much more deeply developed awareness of the nature and importance of ecosystem services, and a fundamental 're-discovery of the rural' that serves to reconnect the populace to the rural working landscape
- *A 'closeness to the ground' in ecological and social terms* – in which the defensibility of ecological outcomes figures prominently, as do investments in social capital
- *Transactions that serve as a reminder of the relationship with the benefit* – with notions of intimacy, social embeddedness, and relations of regard taking centre stage
- *A landscape approach, critical mass and considerations of scale* – underscoring the importance of moving beyond 'random acts of stewardship' and galvanizing cooperation on scales larger than the individual property

- *Safeguards for the landowner* – minimizing the risk and uncertainty absorbed by the landowner, and also by civic actors through a regard for reciprocal obligations (envisioned as part of a renewed social contract under the public good lens)
- *A well-defined suite of ecosystem services* – identified on the basis of our ability to quantify and do the ecological accounting (notwithstanding the uncomplicated nature of that endeavour)
- *A range of recognition mechanisms sensitive to different motivations* – with the intimation that a greater sensibility to the wide-ranging and complex motivations that inspire the provisioning of ES is required (the traditional binary of the intrinsic versus the extrinsic argued to disregard important nuances in adoption behaviours)
- *Permanence* – the architecture as inevitably giving way to collapse absent enduring ecological enhancements and enduring behavioural changes

In building out the architecture, so, too, has the paper considered the prospects for reflexive governance approaches to foster the provisioning of ecosystem services. Might there indeed be angels in a reflexive architecture? Echoing Goffman, the contemplations in the preceding pages suggest reason for cautious optimism. Throughout, threads pointing to the potential value of reflexive strategies come into view, figuring centrally among these the importance of: participatory inclusiveness, meaningful involvement, devolved decision making, a respect for different ways of 'knowing,' collective learning, trust and transparency, flexibility in program design, and principles of adaptive management. In the end, based on the weight of evidence in the research at hand, there is seeming wisdom in the stance adopted by Gunningham (2012):

> *"The more complex the challenge becomes, the less plausible it is to invoke unreflexive policy instruments."*

However, care is taken here not to be dismissive of the vulnerabilities of reflexive approaches. As Voß et al. (2006) observe:

> *". . . the reality of reflexive governance, of course, includes opportunistic behaviour, rhetoric and power struggles no less than it includes collective problem handling, dialogue and cooperation." (p. 425)*

Their call for a careful evaluation of outcomes in light of the potential 'misuses' of reflexive governance harkens back to an earlier refrain in this paper: that a renewed commitment to program evaluation is needed in demonstrating the substantive outcomes of ES programs and

policies. As argued by Ferraro and Pattanayak (2006, p.482), we can no longer depend on "intuition and anecdote to guide the design of conservation investments." Under the public good lens, rigour in assessing and evaluating outcomes becomes even more fundamentally important. Likewise, following the cue of Menzel and Teng (2010), it is argued (unapologetically) that we have much to lose in being inattentive to the 'human dimension' in developing ES programs and policies.

In drawing to a close, the spirit in which this paper was conceived bears mention. It is perhaps best conveyed in the elegant words of John Ruskin:

> *It seems a fantastic paradox, but it is nevertheless a most important truth, that no architecture can be truly noble which is not imperfect.*
>
> *The Stones of Venice II, 1853*

The architecture elaborated here (itself a product of self-reflexive contemplation and re-assessment) is imagined as a beginnings. Far from immutable and static in nature, it is offered in the hopes that others – scholars and practitioners alike – will engage in thoughtfully exploring and pursuing refinements.

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CHAPTER FIVE

CONCLUSIONS

This thesis has been fundamentally preoccupied with the governance arrangements by which we might foster the provisioning of ecosystem services (ES) by private landowners. The overarching aim of the research was to explore the possibilities and, more explicitly, the interests of private landowners, and program and policy professionals, for different arrangements, with an ultimate view to conceptualizing and 'building' a governance architecture supportive of the provisioning of ecosystem services. The research, as presented in the previous pages, reflects a deep engagement with the 'lived experiences' of private landowners, as actors who, in the research context at hand, play a defining role in shaping stewardship outcomes across the landscape. So, too, the perspectives of program and policy professionals were sought out, as actors bringing a depth of experience in fashioning, delivering and evaluating programs and policies that seek to engage private landowners in environmental stewardship activities and efforts.

This final chapter of the thesis serves to précis the principal findings and major contributions of the research effort as presented in the preceding manuscripts. In doing so, it reflects on the research as a whole. Scholarly and applied contributions are treated in turn. The chapter closes by offering reflections on the research process as well as potential openings for future research.

5.1 Key Findings and Empirical Insights

The key findings of the research presented herein are offered chapter by chapter. Driven by the overarching question, What governance possibilities?, the aim of research presented in Chapter Two was to explore the diversity and richness of emerging ecosystem services governance approaches around the globe, with an aim to better understand the characteristics that differentiate them in terms of their likely viability or performance. A high-level reconnaissance of the scholarly and applied literatures served as the basis for developing a heuristic framework for exploring governance alternatives – an anatomy through which the vast heterogeneity in approaches could be explored in a systematic way. Reflection upon the many and varied approaches discussed in the literature led to the development of 10 heuristic analytical fields that formed the centrepiece of the heuristic framework (with regular reference made to a suite of approaches that were illustrative of the marked diversity). Characteristics ranging from the mode

of delivery and the 'who' in the delivery equation, through the nature of landowner commitments, the scale of implementation, the financing structure, the form of landowner recognition, and the nature of monitoring and verifying ecological outcomes having a marked influence on viability and performance.

As unveiled in the course of fleshing out the heuristic framework, the contemplation of ES governance alternatives deeply engages the matter of public and private, and intersections thereof. This engagement suggests that a more open embrace of hybridity in institutional arrangements may offer a way forward as governance alternatives continue to be explored and conceived. The findings also suggest that a re-imagining and re-constituting of relationships, such that they truly embrace the principles of reflexivity, reciprocity and trust, may offer hope for a rapprochement of urban and rural actors – of the sort envisioned as requisite in a new social compact that would serve to acknowledge and animate public support for the provisioning of ecosystem services by private landowners.

The development of the heuristic framework – in serving as a foundation for appreciating the diversity of emerging ecosystem services governance approaches, and, moreover, identifying some of the characteristics and critical issues influencing their viability and performance – set the stage for the empirical investigation presented in Chapter Three. Informed by this wider examination of critical issues, the research set out to better understand how landowners, and program and policy professionals, perceived a range of ecosystem services governance approaches (a suite of eight approaches served to elicit discussion) from the point of view of their appeal and their likely viability. Potential barriers and hurdles to instituting them in the regional context were also explored, as were potential opportunities. While defying an uncomplicated elaboration of the 'perfect' governance model, there was discernable convergence towards some consistently appealing governance features, among these: arrangements founded upon the principles of respect, trust, understanding and reciprocity; approaches with grassroots orientations; approaches exhibiting collaborative and cooperative sensibilities; flexibility in program design and delivery; and, accessibility to technical/field support commensurate with program complexity.

A key finding of this empirical exercise is that the intrinsic-extrinsic binary that is commonly invoked in scholarly discourse in relation to motivations for conservation may oversimplify explanations for adoption/participation behaviours, disregarding important nuances. Indeed, this research revealed motivations of a distinctly intrinsic nature co-existing alongside those exhibiting extrinsic tendencies, which suggests the need for a greater sensibility to the socio-

reflexive workings that shape landowners' motivations. In this regard, a singular way forward is likely to be elusive; rather, much will rest on an empathetic appeal to the wide-ranging and complex motivations of private landowners. Equally compelling is the finding that approaches that foster a strong sense of 'authorship' over and 'investedness' in project design and outcomes could enhance the prospects for bringing about enduring change. Finally, a 'rediscovery of the rural' was viewed as a precondition to garnering widespread civil society support for the provisioning of ecosystem services. This suggests that we are likely to grapple in fostering the provisioning of ecosystem services if governance narratives do not embrace the notion of a shared responsibility for their provisioning.

Bringing together insights from the empirical investigation and the development of the heuristic framework, Chapter Four elaborated a set of high-order design features envisioned as important preconditions for an effectual governance 'architecture' for the provisioning of ecosystem services by private landowners. In 'building' the architecture, eight high-order design features emerged as critical: strong public and political support; a 'closeness to the ground' in ecological and social terms; transactions (between ecosystem services providers and beneficiaries) that serve as a reminder of the relationship with the benefit; a landscape approach, critical mass and considerations of scale; a well-defined suite of ecosystem services; safeguards for the landowner (and so, too, for civic actors through a regard for reciprocal obligations); a range of (recognition) mechanisms sensitive to different motivations; and, permanence, as evidenced by both enduring ecological enhancements and enduring behavioural changes.

Of interest in conceptualizing the architecture was also the question of whether there might be proverbial 'angels' in *reflexive* architecture. In other words, what are the prospects for instituting approaches and strategies of reflexive governance to enhance the provisioning of ecosystem services? The weight of evidence in the research suggests reason for cautious optimism, with threads pointing to the potential value of reflexive strategies including participatory inclusiveness, meaningful involvement, consensus-building, devolved decision making, a respect for different ways of knowing, and adaptive learning and iterative experimentation. That a reflexive governance 'overlay' may offer a productive way forward seems particularly compelling in light of the strongly articulated viewpoint among study participants that a foundation of *shared* responsibility is requisite if we are to make inroads in fostering and enhancing the provisioning of ecosystem services. Consistent with this, the findings also point to the importance of an attentiveness to the 'human dimension' in developing ecosystem services programs and policies.

5.2 Scholarly Contributions

In embarking upon this research, one of the initial challenges was plotting a chart through the somewhat messy, chaotic and 'disordered' scholarship emerging in the fledgling field of ecosystem services. The heuristic framework developed in this research makes an original contribution to the scholarship in drawing attention to a suite of heuristic analytical fields that can be contemplated in a systematic way to frame ecosystem services governance alternatives. In this way it lends some 'ordered neatness'– not only engaging some of the many critical issues being debated in the scholarship (spanning the philosophical, ideological and practical), but bringing them together in more systematic contemplation of how different ecosystem services governance arrangements might ultimately find traction (or fail to do so). That it might help others in navigating the complex landscape of ecosystem services scholarship is the author's great hope, with a welcome invitation that it might be further developed and refined in the spirit of adaptive learning espoused elsewhere in this thesis.

The empirical richness captured in the research represents another contribution in its own right. As noted elsewhere in the thesis, while the ecosystem services scholarship continues to grow ever richer in its treatment of philosophical and ideological issues, less attention has been devoted to the practicalities of how different governance arrangements might be implemented or 'land on the ground' and to the interests of key actors for different arrangements. In this vein, the development of the governance architecture in this work responds to the call by Fletcher and Brietling (2012) for a closing of the "gaps between vision and execution in neoliberal conservation governance." The development of the architecture was also driven by practical interests and concerns, and the intention to expose a set of considerations and foundational elements that might underpin operationally successful ES initiatives regardless of their idiosyncratic qualities.

From the point of view of methodology, the use of what might be termed an 'adapted' version of the focus group represents a unique contribution. In spanning much greater duration than would be traditional, the focus groups convened in the course of this research afforded a rare (and invaluable) depth of interaction. A sensibility to calls for meaningfully incorporating "producer visions and voices" (e.g., see Bowen and De Master 2014) was a driving force in this regard. It is proffered here that those working particularly in the tradition of 'community scholars' have much to gain in reflecting thoughtfully on the nature and design of processes of engagement; the truly immersed nature of this research enriched the process immensely.

In reflecting on contributions of a more theoretical nature, the work lends particular insight to the scholarly contemplation (and debate) of binaries or dualisms. As this research has shown, the contemplation of ecosystem services governance alternatives deeply engages the matter of public and private, and, moreover, novel *intersections* thereof. The findings suggest a more nuanced dimension in which the interplay of state, private and civic spheres could prove synergistic; in short, we have much to gain in embracing hybridity in institutional arrangements (see Sinclair 1997; Bryant and Wilson 1998). The dichotomous pitting of public and private against one another is unhelpful, as it constrains innovative conceptualizations of ecosystem services governance alternatives. Rather, a case is made for solutions that build on the synergies and complementarities that bring the best of public, private and civic spheres together. In a similar vein, this research, in exploring motivations that incite or inspire the provisioning of ecosystem services, revealed the co-mingling of motivations of a distinctly intrinsic nature with those exhibiting extrinsic tendencies, which suggests that the commonly-invoked binary of the intrinsic versus the extrinsic in scholarly discourse may disregard important nuances in adoption behaviours. The intention in the preceding discussion is not to 'vilify' the binary (see Kikuchi 2006) or to 'demonize' binaries as "static instruments of 'Othering'" (see Muller and Warf 2007), but rather to seek out opportunities and openings for a more sophisticated 'in betweenness' – a thoughtful contemplation of how we might forge a 'middle passage' between extremes, as in the spirit of Murdoch (1997).

Finally, this research lends something unique in bringing together the scholarship on ecosystem services and alternative food networks, with specific reference to the concepts of reconnection, relations of regard, affection and intimacy (with our food and with the producers and land from which it derives). These concepts are well known in the scholarship on alternative food networks, but have seemingly not been explored or contemplated in scholarship on ecosystem services. How might these notions be applied to ecosystem goods and services more broadly, beyond the foodstuffs that find their way to our tables? While only able to touch briefly on these ideas in the confines of this thesis, the research intimates that there may be some interesting insights to draw upon. This suggestion is put forward with care in the sense of not wanting to dismiss the scholarly debates that draw attention to a possible 'romanticizing of the local,' and the uncritical privileging of the local over the global (see Born and Purcell, 2006).

5.3 Applied Contributions

This research emanates from a locus of innate passion, marked by a twenty-year career in the field of environmental stewardship. The sincere hope is that the findings serve to help fellow practitioners in contemplating the road ahead for ecosystem services policy and program development – both the possibilities and the potential pitfalls. It is also hoped that the story of those 'closest to the ground' might be widely shared and, above all, thoughtfully contemplated (and their voices further engaged) as programs and policies aimed at fostering the provisioning of ecosystem services are developed and implemented.

In applied terms, the empirical investigation of the interests of private landowners for different ecosystem services arrangements or mechanisms represents a notable contribution. A range of programs and approaches instituted around the world were explored and analysed in some detail in Chapter Three from the point of view their likely acceptability, deliverability, and effectiveness in delivering on the promise of fostering the enhanced provisioning of ecosystem services. This analysis in its own right should offer a great many insights for those developing ecosystem services programs and policies in terms of how those approaches are 'performing' and how they might be enhanced (and pointing to opportunities where ideas might be adopted and/or adapted). In stepping outwards from the more detailed look at the merits and shortcomings of the individual approaches (as perceived by the key actors), a subsequent analytical exercise served as the basis for developing a synthesis of more universally appealing design attributes. These findings, too, should serve to deepen appreciations within the practitioner community for the governance design features that encourage and inspire participation (and, likewise, those that serve to discourage participation).

Informed by these former analyses, the ES governance architecture developed in Chapter Four goes a step further, offering some tangible 'building blocks' (foundation, supporting structures, and capstone). These building blocks (coined 'high-order' design features elsewhere in the thesis) should be of interest to those wrestling with the complex task of designing programs and policies in support of the provisioning of ecosystem services. The ultimate hope is that the architecture developed here might serve to inform on-the-ground piloting or implementation of a variety of approaches by fellow practitioners. Far from immutable and static in nature, it is offered in the hopes that others – scholars and practitioners alike – will engage in thoughtfully exploring and pursuing refinements.

5.4 Reflections on the Research Process and Openings for Future Research

As referenced elsewhere in the thesis, the situatedness of the research is acknowledged. Otherwise put, context matters. It goes without saying that things might take shape differently elsewhere. For instance, absent the cooperative ethos that was palpable among landowners in this context, the appeal of collaborative types of governance approaches might not resonate so strongly. This reflection extends into a related one: that the nature of the landowner complement in this study has inevitably shaped the findings in certain ways. In needing to bound the scope of the research in some manner, the focus here was principally on those landowners with interests in actively managing the working landscape, whether on the farm or in the woodlot (as driven, in part, by the research interests expressed by organizations in the study area and, likewise, eliciting interest within the wider practitioner and policy community). So, for instance, the research did not explicitly include explorations with the non-farming rural landowner community. Such presents an interesting opportunity for future research. How might the perspectives vary, or perhaps converge? In what ways? And, to what consequence for an ES governance framework?

In reflecting on the methods adopted in this research, while landowners and program and policy professionals were engaged in separate, parallel focus groups, an interesting alternative approach might have been to engage actors from the two 'camps' in a singular exercise – as a means of garnering additional insights through the interaction of the two groups. In this vein, a potentially interesting avenue to pursue in future research could be a policy Delphi structured around the bringing together of a subset of both groups in making further improvements and refinements to the proposed governance architecture. In the spirit of reflexivity, the co-production of knowledge and mutual 'solution finding' a point of interest.

Perhaps most compelling in reflecting on the research process was the deeply-felt appreciation expressed by landowner participants at having had the opportunity to be part of "the conversation" about ecosystem services. There was a palpable sincerity in wanting to share and impart their lived experiences (and the depth of insight stemming from these conversations was extraordinary indeed). To this end, as we continue to contemplate ES governance alternatives in scholarly and practitioner circles, it is proffered that there is a great deal to be *discovered* in thoughtfully engaging the voices and visions of those closest to the land (a point that has been made previously but bears repeating). As Wendell Berry (2012) so eloquently submits, in the end, it may very well be that 'it all turns on affection.'

5.5 References

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