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Toward a More Multi-Functional Rural Landscape: Community Approaches to Rural Land Stewardship

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TOWARD A MORE MULTI-FUNCTIONAL RURAL LANDSCAPE: COMMUNITY APPROACHES TO RURAL LAND STEWARDSHIP

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INTRODUCTION

This Article explores how farms and ranches can adapt to meet consumer demand for outdoor activities like hunting, wildlife viewing, hiking, or simply enjoying the solace of spending time in rural places. These places hold breathtaking landscapes, but they are often privately owned, relatively inaccessible to the general public, and have not been managed to produce the ecosystem services[1] that would support these activities, despite strong evidence of consumer demand.[2] Historically, farms and ranches have been managed for a

* Assistant Professor of Law, University of Nebraska College of Law. Parts II and III of this Article are derived from an Article I previously published. Anthony B. Schutz, *Grassland Governance and Common-Interest Communities*, 2 SUSTAINABILITY 2320-48 (2010), *available at* http://www.mdpi.com/2071-1050/2/7/2320/pdf. Many thanks to the editors of the *Fordham Environmental Law Review* for their assistance for inviting me to participate in the symposium. Thanks as well to Eric Freyfogle, Steve Bradford, Steve Willborn, Tyler Sutton, John Davidson, and the participants at venues where I've spoken about this subject, including the University of Oregon School of law, *Journal of Environmental Law and* Litigation, Agricultural Law Symposium, and the Norris Institute's New Era Rural Energy Symposium. A speech I made on this topic for the Grasslands Foundation, with the support of the University of Nebraska Center for Great Plains Studies and the College of Law is available at http://www.grasslandfoundation.org/work/events.html. Financial support from the University of Nebraska College of Law and a McCollum Research Grant are gratefully acknowledged.

1. For one of the most important works on ecosystem services see J.B. RUHL ET AL., THE LAW AND POLICY OF ECOSYSTEM SERVICES (2007).

2. H. Ken Cordell, *The Latest on Trends in Nature-Based Outdoor Recreation*, FOREST HISTORY TODAY, Spring 2008, at 4-10. Evidence of demand can be found in the interests that lobby for various laws governing the use and protection of natural resources. Such groups are comprised of people who care about these

single dominant use, undertaken wholly upon an individual's landholdings. Entering the emerging market for nature-based experiences requires that farms and ranches adapt from fragmented single-use businesses to multi-functional enterprises that cooperatively operate at larger spatial scales. This Article explains how lawyers can help farmers and ranchers can make such a move.

I refer to the emergence of these enterprises as "nature-based entrepreneurship." Nature-based entrepreneurship attempts to capitalize on consumer demand for nature-based activities, while also furthering the conservation movement on private lands. As a consumer-oriented conservation approach, nature-based entrepreneurship involves an embrace of market liberalism in pursuit of environmental goals. And, as this Article explains below, it may be one of the few feasible means of attaining environmental goals on vast, privately owned rural landscapes.

This Article has three parts. Part I draws this Article within the scope of this symposium by exploring a number of links between nature-based entrepreneurship and the local-food movement. Part II focuses on the Northern Great Plains[3] as an example of the problems

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resources—people who are likely willing to pay to enjoy them. More direct evidence exists in the amount of money people spend to travel to public lands to have similar experiences. For an account of rural landscapes as depicted in judicial opinions, see Lisa R. Pruitt, *Rural Rhetoric*, 39 CONN. L. REV. 159, 212-28 (2006). *See generally* FISH & WILDLIFE SERV. U.S. DEP'T OF THE INTERIOR, *and* U.S. DEP'T OF COMMERCE, U.S. CENSUS BUREAU, 2006 NATIONAL SURVEY OF FISHING, HUNTING, AND WILDLIFE-ASSOCIATED RECREATION (2006), http://www.census.gov/prod/2008pubs/fhw06-nat.pdf. Even conservation research and education centers produce substantial economic benefits from consumers taking part in their activities, as Edwards and Thompson have recently found. Richard Edwards & Eric Thompson, *The Role of Conservation Research and Education Centers in Growing Nature-Based Tourism*, 20 GREAT PLAINS RES. 51 (2010). Leases for hunting access are also evidence of consumer demand in areas of the Midwest. BRUCE JOHNSON ET AL., DEP'T OF AGRIC. ECON., UNIV. OF NEB., REPORT NO. 185, NEBRASKA FARM REAL ESTATE DEVELOPMENTS 2007-2008 19 (2008), *available at* http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1001&context=agecon_farmrealestate.

3. Ranchers on the Northern Great Plains are not alone in this effort. There is a growing body of literature collecting examples from around the globe. *See* Almira Hoogesteijn & Rafael Hoogesteijn, *Cattle Ranching and Biodiversity Conservation as Allies in South America's Flooded Savannas*, 20 GREAT PLAINS RES. 37 (2010); Rafael Hoogesteijn & Colin A. Chapman, *Large Ranches as Conservation Tools in the Venezuelan Llanos*, 31 ORYX 274 (1999); Jeff Langholz, *Global Trends in*

nature-based entrepreneurship faces and explores the legal tools available to help producers overcome those problems. Finally, Part III proposes a number of legal reforms that would help establish a vibrant nature-based economy on rural lands in the Northern Great Plains and, perhaps, elsewhere.

In the end, this Article demonstrates that producers have the legal tools available to produce much more than food, and they would do well to realize that opportunity. The Northern Great Plains is one example of where such an opportunity exists, and its lessons can be deployed elsewhere in furtherance of a more multi-functional rural landscape.

I. LINKING LOCAL FOOD AND NATURE-BASED ENTREPRENEURSHIP

The articles collected in this issue focus on the legal tools that may encourage food production closer to consumers—local food. The legal tools generally used to implement a local food policy consist of public law approaches, including the use of agricultural law, land use regulation, environmental law, and international trade law.[4] Those tools are explored in many of the articles in this issue.

This Article diverges from this common theme in two ways. First, it is only moderately concerned with public-law reform, focusing instead on private law. Private law must not be forgotten as a tool that creative lawyers can use to help producers achieve their goals. Whether that goal is food production or something else, drastic

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Private Protected Areas and Their Implications for the Northern Great Plains, 20 GREAT PLAINS RES. 9 (2010); Jeff Langholz et al., *Incentives for Biological Conservation: Costa Rica's Private Wildlife Refuge Program*, 14 CONSERVATION BIOLOGY 1735 (2000); Glyn Maude & Richard P. Reading, *The Role of Ecotourism in Biodiversity and Grassland Conservation in Botswana*, 20 GREAT PLAINS RES. 109 (2010); Nils Odendaal & Danica Shaw, *Conservation and Economic Lessons Learned from Managing the Namibrand Nature Reserve*, 20 GREAT PLAINS RES. 29 (2010); Siva R. Sundaresan & Corinna Riginos, *Lessons Learned from Biodiversity Conservation in the Private Lands of Laikipia, Kenya*, 20 GREAT PLAINS RES. 17 (2010); Byron Swift et al., *Private Lands Conservation in Latin America: The Need for Enhanced Legal Tools and Incentives*, 19 J. ENVTL. L. & LITIG. 85 (2004). I intend to examine this literature, and a collection of legal documents from enterprises in Namibia, in a future article.

4. For an overview of the local food movement, see Marne Coit, *Jumping on the Next Bandwagon: An Overview of the Policy and Legal Aspects of the Local Food Movement*, 4 J. FOOD L. & POL'Y 45 (2008).

changes in public policy are not always necessary. This Article explores one example of private-law creativity that may enhance the local-food movement.

Second, and more fundamentally, this Article is not primarily concerned with food production, let alone whether it occurs close to consumers. Rather, it focuses on a broader vision of agricultural production—the production of those ecosystem services that can serve as the basis for nature-based enterprises.

Despite this divergence, there are at least three links between the local-food movement and nature-based entrepreneurship. The first link lies in the concept of "local." As others have argued, improvements to "land health"[5] are more likely to occur upon the emergence of local communitarian thinking and action.[6] One necessary component to making a community-based effort at improving our natural environment is the ability of people in a particular place to find something that draws them together as a community.[7] The most common example of people coming together as a community and making improvements to land health is the watershed.[8] Impaired rivers and streams tie people together in pursuit of a common purpose, effectively creating a community.

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> Overall, land health can be defined scientifically as nature's ability to keep doing what it has long done--building and retaining soil, clothing the land with lush vegetation, cleansing water flows, capturing sunlight and moving energy through multiple trophic levels, pulling minerals from the subsoil and cycling them through predation chains, and ultimately, giving rise to new life-forms able to find or create suitable niches. . . . [It] looks far beyond the well-being of humans: Other species live on the land, and if the land as a whole is valuable, they, too, are valuable. Health, moreover is both a natural matter and a mysterious process, something understood through collection of empirical data but also grasped in part through intuition, sentiment, and other ways of making sense of the unknown. In short, land health encompasses the kind of durable, flourishing, self-recreating communal life that is the mark of a lasting link between people and place.

ERIC T. FREYFOGLE, BOUNDED PEOPLE, BOUNDLESS LANDS 48-51 (1998).

6. *Id.* at 123-25, 174-75.

7. *Id.* at 123-25, 162-63. By "community" I refer to a group of people interacting with one another in pursuit of a common purpose in a particular place. *See id.* at 123-27 (describing place-based communities and their benefits).

8. *Id.* at 162-63.

Another catalyst for community identification may be the "foodshed."[9] As consumers and producers begin to interact with one another at a local foodshed level, community may develop.[10] Farmers' markets are one place where people may come together. And as producers confront the difficult production and distribution problems they are likely to encounter, cooperation may emerge as a necessary component of a successful foodshed economy. Such cooperation could foster a sense of community.

As that local community develops, it may create the possibility of using rural lands in more multi-functional ways, perhaps even bringing a concern for land health to the forefront of this expanded agriculture.[11] Community is critically important to nature-based entrepreneurship because, as this Article explains below, landowner

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9. Coit explains the term "foodshed" as completely as anyone:

> "The intrinsic appeal the term had and continues to have for us derives in part from its relationship to the rich and well-established concept of the watershed. How better to grasp the shape and the unity of something as complex as a food system than to graphically imagine the flow of food into a particular place? Moreover, the replacement of 'water' with 'food' does something very important: it connects the cultural ('food') to the natural ('...shed'). The term 'foodshed' thus becomes a unifying and organizing metaphor for conceptual development that starts from a premise of the unity of place and people, of nature and society."

Coit, *supra* note 4, at 46 n.4 (quoting Jack Kloppenburg et al., *Coming in to the Foodshed*, 13 AGRIC. & HUM. VALUES 33 (1996), *available at* http://www.cias.wisc.edu/wp-content/uploads/ 2008/07/comingin.pdf).

10. This is true, not only as between producer and consumer, but also among producers and among consumers. Producer groups are, of course, a staple in agricultural law and policy. The National Farm Bureau Federation, the National Farmers Union, the Center for Rural Affairs, and many more ranging from local to state to national levels exist as evidence of this trend. The local-food movement can be expected to work within these, or within its own producer associations. In fact, one major component of local food is a distribution network, which will draw producers together. Buy Fresh Buy Local is one such example. *See Buy Fresh Buy Local Chapters,* FOODROUTES.ORG, http://www.foodroutes.org/bfbl-chapters.jsp (last visited June 30, 2011) (listing BFBL chapters in 22 states, including a number of more local chapters).

11. Interestingly, this sort of community catalyst is driven in large part by conscientious consumers. It thus signals a partial embrace of market liberalism. There are, however, some who believe communities are likely to form only upon a rejection of the individualistic tendencies libertarianism fosters. FREYFOGLE, *supra* note 5, at 70-74. I partially disagree. Conscientious consumers who demand something that can only be produced through cooperation can foster community.

cooperation is a necessary component in creating the resources upon which these businesses would be built. A concern for land health may, in turn, enhance producers' desire to pursue nature-based businesses. And as consumers within the local-food community develop a concern for land health, they may also demand more nature-based experiences..[12]

To realize this possibility and capitalize on the communities that may emerge through the local-food movement, we should take stock of the legal tools that could facilitate such a transformation. While public law and regulation is often one means for communities to implement their preferences, private law is an important tool for local communities that are not easily bounded by a close-fitting political boundary. This Article explores that subject.

The second link between local food and nature-based entrepreneurship is the prospect of rural development. The local-food movement often draws upon the prospect of rural development as a policy justification.[13] Nature-based entrepreneurship is also strongly aligned with a rural-development policy.[14] Rural-development proponents have often touted agri-tourism, eco-tourism, or simply tourism as a piece in the puzzle of maintaining a vibrant rural economy.[15] They have experienced difficulties,[16] but given rural

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12. The environmentalist egg, of course, may precede the local-food chicken. That is, if communities emerge in pursuit of nature-based entrepreneurship (communities that are driven by the need to create resources collectively), then local-food production may follow. Thus, while the local-food movement may contribute to community identification and nature-based entrepreneurship, nature-based entrepreneurship may also facilitate the development of local-food producers and, perhaps, nature-based farmers. Indeed, nature-based entrepreneurs may create local food in the form of wild game, naturally raised livestock, and native fare.

13. Neil D. Hamilton, *Emerging Issues of 21st Century Agricultural Law and Rural Practice*, 12 DRAKE J. OF AGRIC. L. 79, 84, 89-90 (2007). Rural development is also growing concern abroad as countries become more urbanized. For a compelling analysis of what countries should strive for in rural development, see Lisa R. Pruitt, *Human Rights and Development for India's Rural Remnant: A Capabilities-Based Assessment*, 44 U.C. DAVIS L. REV. 803 (2011).

14. *See id.* at 89; Neil D. Hamilton, *Rural Lands and Rural Livelihoods: Using Land and Natural Resources to Revitalize Rural America*, 13 DRAKE J. OF AGRIC. L. 179, 194 (2008).

15. USDA, NATIONAL AGRICULTURAL LIBRARY, RURAL INFORMATION CENTER, *Promoting Tourism in Rurual America*, http://www.nal.usda.gov/ric/ricpubs/tourism.html (last visited June 28, 2011); AGRIC. MKG. RES. CTR.,

population loss, fluctuating income, and the absence of opportunities for adult family members to stay home or return home,[17] the general desire to maintain business as usual may fade in favor of these emerging income opportunities.[18]

Together, a vibrant local-food economy and strong nature-based entrepreneurs could therefore enhance the economic climate of rural areas, support farm and ranch families, and draw together communities on rural landscapes, while improving those landscapes' environmental performance. In short, the combination could improve the economic, social, and environmental fabric of rural lands.

The third link has to do with the many ways in which nature-based entrepreneurship could improve the local-food movement. One can legitimately question the extent to which we should encourage food production, even local-food production, as a dominant land use. Indeed, critics of "industrial" agriculture often cite the vast

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Agritourism, http://www.agmrc.org/commodities__products/agritourism (last visited Jun. 28, 2011).

16. Sometimes producers do not embrace this notion of rural development because they view themselves as food, fiber, and fuel producers. They may not feel that they and their ancestors endured a great many difficulties—settling the American West, the Dust Bowl, cyclical farm crises, and many other personal hardships—to provide a tourist experience. For a telling tale of life on one part of the Great Plains, see generally TIMOTHY EGAN, THE WORST HARD TIME: THE UNTOLD STORY OF THOSE WHO SURVIVED THE GREAT AMERICAN DUST BOWL (2006). Given that history, many may hold firm to a perceived higher calling: feeding the world. Placing environmentalism on par with food is no easy task, but there is a strong thread of it in agrarianism. The two notions need not be at odds.

17. The importance of farms and ranches as homes deserves more attention than I can give it here. Throughout the farm crisis of the 1980s, for instance, tremendous attention was paid to saving the family farm. The normative case for the effort is questionable if one focuses on macro-level economic concerns about agricultural production and structural change. But the connection between producers and their lands is something more than the use of commercial real estate. One vision of the connection is in the concept of home. *See* FREYFOGLE, *supra* note 5, at 114-30. Wendell Berry, whom Freyfogle writes about extensively, is also a prolific scholar on this subject. *See, e.g.*, WENDELL BERRY, BRINGING IT TO THE TABLE: ON FARMING AND FOOD 153 (2009) ("Elmer Lapp is eminently a traditional farmer in the sense that his farm is his home, his life, and his way of life--not just his 'work place' or his 'job.' "); *id.* at 31-36 (defining and defending the "family farm").

18. CURTIS FREESE ET AL., WORLD WILDLIFE FUND, NEW DIRECTIONS FOR THE PRAIRIE ECONOMY: CONNECTING CONSERVATION AND RURAL DEVELOPMENT IN THE NORTHERN GREAT PLAINS 31 (2009).

landscapes devoted to production agriculture as a reason for a more local foodshed production model.[19] However, little attention has been paid to the problems a myopic view of local agriculture might cause. It is here, of course, that things like "natural systems agriculture,"[20] organic production, and sustainable agriculture come into play. And the local-food movement, at times, embraces them.[21] But the local-food movement will not necessarily require those sorts of production systems if it focuses solely on production (even diversified production) and geography. To avoid this problem, singular views of how land should be used ought to be displaced by more holistic views of what a landscape produces and how it produces it. Food is, of course, one important thing we get from a landscape (and we can produce it in many ways), but there are other important products.[22] Nature-based entrepreneurship may encourage their production within the local foodshed, perhaps dovetailing nicely with the adoption of natural-systems agriculture.[23] Eclipsing that prospect in favor of a local-food policy would expose the movement to many of the criticisms that can be leveled at our existing production system.

One of those key criticisms is the environmental impact of food production. Agriculture is not environmentally benign, and stemming the adverse environmental consequences of agriculture on privately owned lands has been a huge challenge for environmentalists.[24] The sheer scale of the United States' privately owned landscape makes

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19. *See* Coit, *supra* note 4, at 55.

20. Wes Jackson, *Farming in Nature's Image: Natural Systems Agriculture*, in THE FATAL HARVEST READER: THE TRAGEDY OF INDUSTRIAL AGRICULTURE 65 (Andrew Kimbrell ed., 1999).

21. *See* Coit, *supra* note 4, at 51-55 (providing a description of local-food environmental impacts, with primary emphasis on energy consumption, but not production methods). For an author who includes both biodiversity concerns and local-food consumption, see Catherine Badgley, *Can Agriculture and Biodiversity Coexist*, *in* THE FATAL HARVEST READER, *supra* note 20, at 199, 206.

22. Hamilton, *supra* note 13, at 93-94.

23. *See* Joan Iverson Nassaer, *Agricultural Systems in Harmony with Nature*, *in* THE FATAL HARVEST READER, *supra* note 20 at 49, 57 ("The new agricultural landscape will be beautiful in a way that invites tourism. Scenic Roads and byways and places for visitors to stay will become more appealing as parts of the countryside that have lost habitat, streams, or a varied landscape pattern regain a more recognizable image of nature.").

24. *See generally* J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 ECOLOGY L.Q. 263 (2000).

regulatory approaches difficult.[25] This same scale makes these privately owned lands tremendously important from a conservation perspective.[26] Given this importance and the difficulties associated with environmental regulation at this vast scale, encouraging land uses that generate income may be a better tack. In fact, it was precisely this tack that our first, and all subsequent farm bills have taken with commodity production. Nature-based entrepreneurship may thus help deal with the environmentalist objection to local food by ensuring that local-food production does not displace the environmental value of landscapes.

The final aspect of nature-based entrepreneurship that could make the local-food movement better is its utility as a risk-management strategy. Food producers experience a great deal of risk.[27] Price risk and production risks (including pests, weather, and disease) combine to create a high level of revenue uncertainty for producers, especially producers with small financial reserves.[28] The field of agricultural law devotes considerable attention to the legal aspects of managing

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25. *See id.* at 329-30. There are 922,095,840 acres of land in farms in the United States, distributed among 2,204,792 farms. 44.1% of that is cropland, 8.1% is woodland, 44.3% is pasture, and 3.4% is occupied by things like buildings, farmsteads, livestock facilities, and ponds. USDA, 2007 CENSUS OF AGRICULTURE 16, tbl. 8 (2009). Compare those figures to the sixty million acres of urban land uses in the United States. USDA, MAJOR USES OF LAND IN THE UNITED STATES, 2002 2 fig. 1 (2006), http://www.ers.usda.gov/publications/EIB14/eib14.pdf.

26. As Morrisette explains,.

> There are few intact ecosystems today that exist solely on public lands. And yet, in some cases there are still remarkably intact ecosystems that exist almost exclusively on private lands. One-quarter of all ecosystem types are inadequately represented on federal lands, and seven percent are not found on federal lands at all. Most of the wetlands in the contiguous United States are privately owned. Approximately half of all threatened and endangered species in the United States are found exclusively on private lands, and 20 percent of the remainder spends half of their time on private lands.

Peter M. Morrisette, *Conservation Easements and the Public Good: Preserving the Environment on Private Lands*, 41 NAT. RESOURCES J. 373, 374 (2001).

27. For a discussion of these risks generally, see USDA, 2007 FARM BILL THEME PAPERS: RISK MANAGEMENT (2006), http://www.usda.gov/documents/Farmbill07riskmgmtrev.pdf. For an introduction into the many legal issues relevant to agriculture, including a concern for sustainability, see SUSAN A. SCHNEIDER, FOOD, FARMING, AND SUSTAINABILITY (2011).

28. *See id.* at 2-3. The typical reference is to "small farms", but it is quite difficult to figure out what makes a farm "small."

these risks. Price risks are, for instance, passed to other economic actors through forward contracts and futures contracts, including their derivatives.[29] Production risk is managed through things like crop insurance and the farm bill's commodity title.[30] Income diversification is also a risk-management technique.[31] Off-farm employment is one form of income diversification, but there are on-farm opportunities available, like marketing nature-based experiences to consumers.[32] The local-food producers of tomorrow may therefore be well-advised to think about producing something in addition to food as a diversification strategy. This Article charts one way of helping producers to do just that.[33]

II. CONSIDERING NATURE-BASED ENTREPRENEURSHIP ON THE NORTHERN GREAT PLAINS

The Northern Great Plains is an example of a place where nature-based entrepreneurship may achieve environmental and rural-

29. *See id.* at 3.

30. *See id.* at 4-6.

31. *See id.* at 2-4.

32. Clearly, the best diversification opportunities are counter-cyclical. I do not have the data to claim that nature-based businesses perform well when commodity-based farm revenue is low. But if they do, then nature-based entrepreneurship would obviously be a good diversification strategy. Even if they do not, income diversification can help guard against more individual risks such as adverse weather conditions or isolate crop failures.

33. There is a fourth link between the expanded form of production addressed here and the local-food movement. If the local-food movement reduces the demand for food currently being met by production in more distant locations, then there might be an opportunity to use those more distant lands differently. Nature-based entrepreneurship could emerge as an alternative or complimentary land use. Making this link is difficult for two primary reasons. First, to the extent nature-based business competes with more traditional forms of production, competition for land may be with land uses like fiber and fuel production. Reducing food production pressure would have little effect on that competition. Second, given the global agricultural market-place and the forecasts concerning global food demand, building more production at local levels domestically may not free resources for alternative use in more distant locations in the United States. In other words, demand may outpace any increased supply. To further complicate matters on the supply side, international efforts at increasing production (local or not) and fair weather in productive places can have a significant impact on supply. So it is far too simplistic to suggest that the emergence of local food will open doors for nature-based entrepreneurship as a function of a more bountiful food harvest.

development goals, complementing its long history of food production. Section A describes the Northern Great Plains and its environmental relevance. Section B explains the problems facing nature-based entrepreneurs. Section C discusses the legal tools that can help producers overcome these problems.

A. The Northern Great Plains

The Northern Great Plains includes parts of Nebraska, South Dakota, North Dakota, Wyoming and Montana in the United States and parts of the Canadian provinces of Saskatchewan and Alberta, spanning approximately 178,657,000 acres.[34] Twenty-four percent of the land is publicly owned, but less than two percent of it is managed primarily for biodiversity conservation.[35] The remaining seventy-six percent of it is privately owned, and sixty-four percent of that land is devoted to livestock grazing.[36]

The World Wildlife Fund has designated the Northern Great Plains as a "Global 200 ecoregion—one of the 238 most biologically significant places on Earth."[37] It is one of the few areas in the world where a grassland ecosystem exists at a large scale, and much of the grazing land is in its native or semi-native habitat. Most of the native grassland consists of mixed-grass or shortgrass prairie.[38]

Prairie is a particularly interesting landscape that is sometimes overlooked as an appealing destination. Indeed, in the United States, it lies in the shadow (figuratively and literally) of the great mountainous west, and it doesn't often draw the attention of those looking for the water-based landscapes of the Great Lakes region to its east. But it is spectacular upon closer examination.

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34. Curtis Freese et al., *Proposed Standards and Guidelines for Private Nature Reserves in the Northern Great Plains*, 20 GREAT PLAINS RES. 71, 71-84 (2010).

35. *Id* at 71.

36. *Id.*

37. STEVE FORREST ET AL., N. PLAINS CONSERVATION NETWORK, OCEAN OF GRASS: A CONSERVATION ASSESSMENT FOR THE NORTHERN GREAT PLAINS 4 (2004), *available at* http://www.npcn.net/documents/npcn%20ca%2011mar04.pdf.

38. Richard Edwards & Richard P. Reading, *Saving the World's Grasslands: An Introduction*, 20 GREAT PLAINS RES. 5, 5-7 (2010), ("While estimates differ, it appears that in the northern Great Plains only about 1% to 3% of the original tallgrass prairie remains intact, perhaps 20% to 30% of the mixed-grass prairie, and 40% to 70% of the shortgrass prairie.").

> Prairie is one of the most subtle and complex of ecosystems, and to those who have taken the time to get to know it, there is nothing comparable. What to the untrained eye may seem to be a simple monoculture is in fact one of our most diverse sources of plant, soil, insect and animal life.[39]

The need for prairie conservation is pressing. Its privately owned grasslands are being converted to cropland at an increasing pace due to high commodity prices (attributable to a variety of factors like biofuels policy)[40] and government programs that support traditional agricultural production.[41] Grazing lands are also problematic.

39. John H. Davidson, *North America's Great Carbon Ocean: Protecting Prairie Grasslands Keeps Carbon in the Soil and Slows the Pace of Climate Change*, 29 SAVING LAND 19 (2009), *available at* http://www.landtrustalliance.org/about/saving-land/winter-2010/carbon-ocean.pdf.

40. *Id.*

41. FORREST, *supra* note 37, at 53. Programs that clearly encourage agricultural production are those that remain tied to actual production, like average crop revenue election payments, marketing assistance loans, loan deficiency payments, crop insurance, and supplemental disaster assistance. *See* 7 U.S.C. § 8715 (Supp. IV 2010) (average crop revenue election program); 7 U.S.C. § 8731 (Supp. IV 2010) (nonrecourse marketing assistance loans); 7 U.S.C. §8735 (Supp. IV 2010) (loan deficiency payments); 7 U.S.C. §§1501-24 (Supp. IV 2010) (crop insurance); 7 U.S.C. § 1531 (Supp. IV 2010) (supplemental disaster assistance). Direct payments and counter-cyclical payments are divorced from actual production for the most part, with those payments tied to "base acres"--acres with a history of production. *See* 7 U.S.C. § 7911 (Supp. IV 2010) (establishment of base acres); 7 U.S.C. § 8702(2) (Supp. IV 2010) (defining base acres); 7 U.S.C. § 8711 (Supp. IV 2010) (adjustments to base acres); 7 U.S.C. § 8713 (Supp. IV 2010) (availability of direct payments); 7 U.S.C. § 8714 (Supp. IV 2010) (availability of counter-cyclical payments). *But see* 7 U.S.C. § 8717 (Supp. IV 2010) (prohibiting the production of fruits, vegetables, and wild rice on base acres, subject to a variety of exceptions and pilot programs). Those payments do not encourage conversion in the same way, absent the possibility that the production on new lands can someday qualify for "base acre" treatment. There is, of course, that possibility.

The only farm-bill efforts at reducing the conversion incentive provided by commodity-based subsidies are found in "swampbuster," "sodbuster," and the "sod-saver" provisions of the Farm Bill. Swampbuster has been the most significant limitation, aided in part by Section 404 of the Clean Water Act. *See generally* Stewart L. Hofer, Comment, *Federal Regulation of Agricultural Drainage Activity in Prairie Potholes: The Effect of Section 404 of the Clean Water Act and the Swampbuster Provisions of the 1985 Farm Bill*, 33 S.D. L. REV. 511 (1988). Sodbuster is concerned only with soil erosion losses from highly erodible

Traditional grazing practices are not suited to maintaining a habitat for many grassland bird species, and grazing in riparian areas results in degradation.[42] In addition, cattle producers often eliminate native grazers like prairie dogs, states cap the population of species like elk through hunting regulations geared at protecting grazing land, and large carnivores are largely missing from the landscape.[43] In essence, wildlife on these working landscapes is eliminated or managed as a pest to be reluctantly tolerated. It is not often viewed as a valuable resource.

Despite all of this, those who own and occupy the landscape often tout themselves as the best stewards, decrying environmentalists as meddlers.[44] Their stewardship claim is not unfounded. Farmers and ranchers have a deep love for the landscape they have toiled on and against for so many generations; they rely upon biological processes for their livelihoods; and almost all maintain a concern for future generations—a concern typically voiced as a desire to pass the lands to their children and grandchildren. Importantly, these people also know a great deal about their property, including its vegetation and wildlife.[45]

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lands and, thus, does not provide much protection for native prairie. *See* 16 U.S.C. § 3812(a)(2) (Supp. IV 2010) (providing for an exception to sodbuster ineligibility so long as the producers is following a conservation plan geared at soil loss); 16 U.S.C. § 3812(a) (Supp. IV 2010) (providing for the development and implementation of conservation plans under sodbuster). Finally, Sodsaver places nearly no restrictions on conversion. *See* 7 U.S.C. § 1508(o) (Supp. IV 2010) (providing for a five year restriction for crop insurance on lands converted from "native sod", but requiring that states in the Prairie Pothole National Priority Area opt-in through a gubernatorial election).

42. FORREST, *supra* note 37, at 57-58.

43. *Id.*

44. *See* J.B. Ruhl, *Farmland Stewardship: Can Ecosystems Stand Any More of It?*, 9 WASH. U. J.L. & POL'Y 1, 2-3 (2002).

45. I make these observations from years of personal experience with my family and the rural community I grew up in. For a summary of findings from rural sociologists, see Christopher S. Elmendorf, *Ideas, Incentives, Gifts, and Governance: Toward Conservation Stewardship of Private Land, in Cultural and Psychological Perspective*, 2003 U. ILL. L. REV. 423, 437-44. Evidence can be found in the popular media as well. *See, e.g.*, Ellen Campbell, *Selling the Family Farm*, THE FENCE POST (Mar. 19, 2011), *available at* http://www.thefencepost.com/article/20110319/NEWS/110319924.

But producers are unlikely to produce many of the ecosystem services that we need for a healthy and prosperous future.[46] Non-point source pollution and nutrient loading in our nation's waterways is but one example of environmental damage that undercuts producers' stewardship claim,[47] and biodiversity loss is another.[48] These sorts of problems reveal at least one significant limitation to the landowner-as-steward principle: producers' management choices respect nature to the extent it makes economic sense on their properties and does not harm their neighbors who are engaging in the same pursuits.[49] Clearly, the biological processes from which

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46. Indeed, if we are entitled to those goods and services, these stewards are not merely reluctant providers; they are causing a great deal of harm. Ruhl, *Farmland Stewardship: Can Ecosystems Stand Any More of It?*, *supra* note 44, at 11-13; Ruhl, *Farms, Their Environmental Harms, and Environmental Law, supra* note 24, at 274-92; J.B. Ruhl, *Three Questions for Agriculture About the Environment*, 17 J. LAND USE & ENVTL. L. 395, 400-01 (2002).

47. Doug Williams, *When Voluntary, Incentive-Based Controls Fail: Structuring a Regulatory Response to Agricultural Nonpoint Source Water Pollution*, 9 WASH. U. J.L. & POL'Y 21, 44-49 (2002).

48. *See* Ruhl, *Farms, Their Environmental Harms, and Environmental Law, supra* note 24, at 274-77. Ruhl includes a long list of environmental harms, including habitat loss and degredation, soil erosion and sedimentation, water resources depletion, soil and water salinization, agrochemical releases, animal waste, nonpoint source water pollution, and air pollution.

49. I do not think producers should be asked to turn away from economic returns in favor of environmental altruism. Wendell Berry agrees: "I would not endorse any more wilderness preservation projects that do not seek also to improve the health of the surrounding economic landscapes and human communities . . . . The dualism of domestic and wild is, after all, mostly false, and it is misleading." BERRY, *supra* note 17, at 68. At the same time, economic liberalism does not necessarily mean the rejection of communitarian thought. *See* FREYFOGLE, *supra* note 5, at 72 ("In its original form, liberalism sought not only to promote the individual as such but also to vest individuals with the power to join with others to pursue shared aims."). My point here is simply that the markets producers currently serve (and the biological processes they currently use) do not foster community in a way that is environmentally beneficial. Nature-based entrepreneurship may, however, result in better stewardship.

Notably, some attribute the lack of stewardship to "corporate" farming. *See* Dave Henson, *The End of Agribusiness: Dismantling the Mechanisms of Corporate Rule*, *in* THE FATAL HARVEST READER, *supra* note 20, at 225-39. As a lawyer, I can only make sense of the "corporate" claim by construing it as a rhetorical move that encapsulates concerns about consolidation, increased mechanization, and high technology. Indeed, some are more careful in their rhetoric, referring to industrialization as a pitfall or describing what they mean by corporate. *See id.*

producers profit have been narrowly defined by the markets they serve, often to the exclusion of many environmental benefits. Protecting downstream water quality creates no income for producers. Carbon storage has made no money, until recently. Habitat and biodiversity losses are not lost opportunities, but gains in productive capacity. And there is little incentive for producers to develop information concerning largely external environmental benefits.

Changing the economic calculus can make things better. So-called ecological-services markets and broader efforts at economically valuing ecosystem services for policymaking purposes are evidence of a trend to better integrate ecology within economic systems.[50] Markets are also emerging as a preferred policy choice for maintaining or enhancing the environmental benefits that flow from privately owned farms and ranches.[51] Examples include water-quality markets, borne of regulatory regimes in some watersheds.[52] And greenhouse-gas regulation has also supported carbon markets.[53] Using consumer demand for nature-based activities to produce habitat and biodiversity gains is another way of envisioning how market liberalism can support environmental goals, even without the

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50. *See* Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems,* 83 MINN. L. REV. 129, 165-66 (1998) (describing this trend); NATURE'S SERVICES: SOCIETAL DEPENDENCE ON NATURAL ECOSYSTEMS (Gretchen C. Daily ed., 1997).

51. *See* Memorandum from Edward T. Schafer, Secretary, US Dep't of Agric., Secretary's Memorandum 1056-001: Establishment of the Office of Ecosystem Services and Markets (Dec. 15, 2008), *available at* http://www.ocio.usda.gov/directives/doc/SM1056-001.pdf; RUHL, *supra* note 1, at 169-247 (providing case studies); J.B. Ruhl & James Salzman, *The Law and Policy Beginnings of Ecosystem Services*, 22 J. LAND USE & ENVTL. L. 157 (2006) (tracking the development of the area). The entire Spring 2007 issue of Volume 22 of the *Journal of Land Use and Environmental Law* is devoted to the field of ecosystem services and law.

52. *See Water Quality Trading*, ENVTL. PROT. AGENCY, http://water.epa.gov/type/watersheds/trading.cfm (last visited Apr 22, 2011).

53. William Boyd & James Salzman, *The Curious Case of Greeening in Carbon Markets*, 41 ENVTL L. 73, 78-80 (2011) (evaluating both voluntary and compliance markets). *See also* AGRAGATE CLIMATE CREDITS CORP., http://www.agragate.com/ (last visited Apr 22, 2011) (providing information on "climate credits" on farmlands).

regulatory genesis. A simple statement I've heard from producers encapsulates this phenomenon: "If it pays, it stays."[54]

B. Nature-Based Entrepreneurs and the Problem of Fragmentation

An anecdote from Nebraska helps illustrate the problems facing landowners who are trying to make nature pay.[55] The Switzer family owns Switzer Ranch,[56] near Burwell, Nebraska.[57] In 2001, when two of Bruce Switzer's children wanted to join his operation, the family saw the need to expand its operation. But rather than acquire more land for cattle production, the family decided to diversify its operation. In 2001 they built lodging for guests and began offering horseback riding, guided hunting, bird watching, and boating services on a nearby river.[58] The family formed Calamus Outfitters as a way

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54. In this Article, I do not discuss the very important issue of commodification--the idea that there are adverse economic, moral, social, and environmental consequences to making nature pay. *See* David Ehrenfeld, *Hard Times for Diversity*, *in* THE FATAL HARVEST READER, *supra* note 20, at 81 ("In the long run, basing our conservation strategy on the economic value of diversity will only make things worse, because it keeps us from coping with the root cause of the loss of diversity."); Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1851-52, 1903-14 (1986) (making the case that market inalienability ought to be based on concerns for human flourishing). It is a significant and often persuasive argument. But there are some who disagree. *See* Rose, *supra* note 50, at 169-74 (describing the objection and concluding that regulation is a "second best" solution to the problem of partial property, with more property being the "first best"). Here, I am more concerned eith the means of making nature pay, independent of a normative judgment about whether or not to introduce more economic returns to attain better environmental outcomes.

55. Examples from Iowa are offered in Neil D. Hamilton, *Rural Lands and Rural Livelihoods: Using Land and Natural Resources to Revitalize Rural America*, *supra* note 14, at 179.

56. SWITZER RANCH, http://switzerranch.com (follow "About Us" hyperlink) (last visited June 28, 2011).

57. Interestingly enough, Burwell is one of the few rural places in the state that is gaining population and, by some indicators, prospering. David Hendee, *Burwell Bucks Census Odds*, OMAHA WORLD HERALD, Mar. 27, 2011, *available at* http://www.omaha.com/article/20110327/NEWS01/703279883. The extent to which this is based on nature-based entrepreneurs in the area remainsunclear, but a correlation seems plausible.

58. David Hendee, *Eco-Tourism a Cash Crop?*, OMAHA WORLD HERALD, March 23, 2011, *available at* http://www.omaha.com/article/20110323/NEWS01/703239880.

of marketing these new endeavors.[59] Today, Calamus Outfitters offers a wide range of experiences for the paying customer seeking to experience the beauty of Nebraska's Sandhills region, including its flora, fauna, wildlife, and ranching heritage. Importantly, the Switzers continue to raise cattle, which belies any rigid dichotomy between conservation and production, and illustrates how food production and nature-based entrepreneurship complement one another.[60] The Switzer Ranch now supports three growing families.

But problems have emerged. The Switzers, for instance, have encountered a key limitation—their property boundary. Wildlife provide the foundation for parts of their business, but the presence of wildlife depends on how the grassland is managed on a large scale. If the Switzers' grassland-management choices extended beyond the reach of their 12,000 acre ranch, wildlife populations could rise and become more diverse. Access to neighboring lands would also open up more opportunities for hunting, camping, bird watching, and other land-based activities. To that end, the Switzers have sought the cooperation of neighbors to enhance the presence of wildlife on their and their neighbors' ranches, offering their customers a geographically and ecologically broader experience.[61]

The Switzer example shows us that geographic size is critical to nature-based entrepreneurship in areas where wildlife is an important resource.[62] Ranchers with relatively small tracts of land are unable to offer experiences that require a larger space. For instance, it takes a great deal of land to manage a habitat for a sizeable herd of large mammals, given their home range.[63] Most individual ranchers will not have enough. Expanding the geographic size of the operation is also likely to increase diversity simply by including a more diverse

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59. CALAMUS OUTFITTERS, http://www.calamusoutfitters.com/index.htm (last visited June 28, 2011).

60. *See* Hoogesteijn & Hoogesteijn, *supra* note 3, at 37-50.

61. Environmentalist organizations have noticed the benefits of the Switzers' effort. Recently, the Audubon Society designated the Switzers' property along with cooperating neighbors' property as an Important Bird Area called the Greater Gracie Creek Landscape. It is the first privately owned site in Nebraska so designated. *Greater Gracie Creek Landscape*, AUDOBON SOC'Y OF NEB., http://www.nebraska.audubon.org/ne-IBAsp27.htm (last visited June 28, 2011).

62. Edwards & Reading, *supra* note 38, at 5-7.

63. *See* GRAEME CAUGHLEY & ANNE GUNN, CONSERVATION BIOLOGY IN THEORY AND PRACTICE 309-40 (1996) (discussing objectives, size, number shape, and location of reserves in Chapter 10: Reserves in Theory and in Practice).

array of habitat types and the home ranges of smaller-ranging species. Thus, to the extent income increases with diversity and the presence of large mammals, bigger is better.

Further, larger size opens up the possibility of allowing or replicating ecological processes that are impossible or less effective at small scales (e.g., prairie fires or the grazing pattern of a herd of wild ungulates).[64] And there may be efficiency scales associated with engaging in certain wildlife-production activities or creating amenities that cross larger tracts of land. If the cost per acre of such improvements decreases as more acres are added to the operation, then bigger is better from a cost perspective.[65]

All of these benefits can be attained through the acquisition of more land. Agricultural land is, however, expensive and it is offered for sale much less often than other real estate.[66] And there are a variety of reasons for exploring other options, not the least of which is to avoid concentrated land holdings on our rural landscapes.[67] Exploring these other options requires us to think more clearly about the problem of geographic size.

By geographic size, I refer to the amount of land a producer owns, bounded by a legally recognized set of geographical boundaries. Land ownership is, of course, a legal construct that is widely lauded for its benefits. But there are consequences to fragmenting a landscape with property boundaries. I have already identified two of those consequences: the problems it poses to wildlife production and diversity, and the inability of landowners to achieve scale for some

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64. Freese, *supra* note 34, at 76.

65. Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1332-34 (1992). Larger tracts may also reduce the risk of geographically isolated production failures.

66. Bruce Johnson, *A Thin Real Estate Market Becomes Even Leaner*, CORNHUSKER ECONOMICS, September 8, 2010, *available at* http://agecon.unl.edu/c/document_library/get_file?uuid=be24fde0-fcf9-436f-8af4-6bf301fdc4af&groupId=2369805.

67. In fact, the preservation of prosperous rural populations may require a different option. In this regard, the literature concerning concentrated landholdings and their deleterious effect on rural communities is relevant. *See* WALTER GOLDSCHMIDT, AS YOU SOW (1947) (entirely devoted to the subject); Linda M. Lobao et al., *Still Going: Recent Debates on the Goldschmidt Hypothesis*, 58 RURAL SOC. 277 (2010).

pursuits on tracts of land that are too small.[68] Thinking about wildlife production as a boundary problem helps us better understand potential solutions other than outright land acquisition.

Property boundaries fragment the management of a landscape, limiting each landowner's sphere of authority to a particular space. This limited authority poses a problem for wildlife production. In order to increase the amount of wildlife, a landowner does not necessarily need more land. Rather, he needs a method for ensuring that his neighbors will manage their lands to provide suitable wildlife habitat, and he needs assurances that this will continue for a sufficient period of time.[69]

The nature-based entrepreneur also needs something more than coordinated management. Eric Freyfogle recently wrote about "the tragedy of fragmentation," which occurs because "[t]he individual landowner simply [cannot] capture the benefits of good land use, just as he d[oes] not bear the full costs of bad land use."[70] For our purposes, the good land use Freyfogle refers to can include the

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68. This boundary problem is common to ecosystem governance in general. *See generally* Bradley C. Karkkainen, *Collaborative Ecosystem Governance: Scale, Complexity, and Dynamism*, 21 VA. ENVTL. L.J. 189 (2002). For instance, with government approaches to solving environmental and natural resources problems, political boundaries are problematic when a problem transcends those boundaries. So-called cross-border collaboration among governmental entities is thus a common subject in the public sector. *See Regional Collaboration*, LINCOLN INST. OF LAND POL'Y, http://www.lincolninst.edu/subcenters/regional-collaboration (last visited June 28, 2011).

69. On the problem of credible commitment generally, see ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION, 43-45 (2003).

70. Eric T. Freyfogle, *The Tragedy of Fragmentation*, 36 VAL. U. L. REV. 307, 322 (2002). Elmendorf states that, "[t]he ecological benefits of a given form of investment increase more than proportionately with the number of contiguous acres subject to treatment." Christopher S. Elmendorf, *Securing Ecological Investments on Other People's Land: A Transaction-Costs Perspective*, 44 NAT. RESOURCES J. 529, 534 (2004). This may, however, simply mean that the ecological benefits of some practices materialize at great distances, beyond the boundaries of the owner's land--outside of the "contiguous acres subject to treatment."

See also RUHL, *supra* note 1, at 109. Ruhl and his co-authors describe the common-law of property as failing to recognizing the values of ecosystem services, given such legal principles as the doctrine of waste, weak nuisance protection, and a prohibition on implied negative easements.

production of resources for a nature-based business. Thus, Freyfogle's tragedy identifies a further aspect of the boundary problem: the inability to capture the benefits of wildlife production—benefits that spill beyond the landowner's boundaries.[71]

For example, if a producer invests in habitat (e.g., by constructing new facilities or changing one's grazing practices), increased wildlife populations and associated economic benefits may materialize beyond his boundaries and out of his reach. These extraterritorial benefits do not generate a return so long as they remain extraterritorial. Acquiring more land is, thus, a promising solution, but only because it gives the landowner a way of capturing the benefits of his investment—expanding his boundary.

Landowner cooperation is another way to overcome the boundary problem. Landowners can jointly manage their properties for a better wildlife resource and jointly capture its benefits. They can create what Ellickson calls an "external special-purpose boundary."[72] By cooperating in pursuit of this particular purpose, cooperating landowners are creating a conceptual boundary that is external to each parcel, enveloping all cooperating landowners' property. As they move that boundary in pursuit of their common purpose, they simultaneously increase the size of their landholdings. Thus, through cooperation, they can take advantage of scale efficiencies, increase diversity by including species and habitats that one or more of them did not have individually, produce wildlife with home ranges that fit within their collective boundary, and capture the benefits of their investment.[73]

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71. *See also* Robert C. Ellickson, *New Institutions for Old Neighborhoods*, 48 DUKE L.J. 75, 80 (1998).

72. Ellickson, *supra* note 65, at 1334.

73. Ruhl and his co-authors reject the capacity of landowners to cooperate and overcome these challenges, stating "property in the United States has become too valuable, and its management challenges too complex, to expect that it would wind up being held in substantial amounts by large, amorphous, ungoverned groups of individuals." RUHL, *supra* note 1, at 111. I agree with that statement, but consumers are conspicuously absent from Ruhl's book. I posit that there is room for improvement among groups of landowners who are driven by consumers to produce a resource that producers cannot create on their own. While this may not occur on the scales Ruhl envisions, nor generate all of the ecosystem services that one may want, it is at least a start. Ruhl, however raises many legitimate questions about the emergence of these groups. *See id.* at 164-68 (describing the lack of institutions in places where one would expect to find them); and at 162-64

However, demonstrating the need for and utility of landowner cooperation is only a preliminary step. One must also consider how to structure cooperation in light of the collective-action problems the participants are likely to encounter.

The collective-action problems are best conceptualized using Elinor Ostrom's work evaluating common-pool-resource problems.[74] Cooperating landowners in this context create and use common pool resources; that is, resources common to the cooperating group, but from which the group can exclude non-members.[75] Professor Ostrom has developed two categories of problems facing collective action in

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(describing the creation, ultimate demise, and public-law replacement of a regime governing lobstering in Maine). For a similar rejection of landowner coordination *see* Karkkainen, , *supra* note 68, at 213-14.

74. OSTROM, *supra* note 69. Professor Ostrom's work has a broader application as well. For instance, she offers a theory of how individuals cooperate despite the tragedy of the commons, the prisoner's dilemma, and the logic of collective action. *See id.* at 2-7. And her theory stands in conjunction with the theory of the firm and the theory of the state in explaining how collective action can be achieved. *Id.* at 38-42. Her analysis establishes how collections of individuals can supply an institution, solve the problem of credible commitment, and engage in mutual monitoring--all theoretical necessities to the emergence of collective action. *Id.* at 42-46. In so doing, she explains how people have overcome the free-rider problem and the holdout problem in contexts like these.

The holdout and free-rider problems have been touted in the literature as a very significant impediment to collaboration. *See* Ellickson, *supra* note 71, at 76; Elmendorf, *supra* note 45, at 428-31. As Ostrom's work demonstrates, the existence of long-enduring collective action institutions tells us that the holdout and free-rider problems are overcome in many instances. Thus, there is much more to explaining how people collaborate.

This Article does not explore the economic and institutional theories explaining the emergence of collective action. Rather, my point is to consider the tools that a lawyer could use to help willing collaborators. Thus, I borrow only a small amount of Ostrom's work--that which I think is the most relevant to organizing the problems cooperating individuals may face and those characteristics she has observed in successful collective-action institutions. *See infra* Part II.C.

75. OSTROM, *supra* note 69, at 30-33. The ability to exclude non-members exists as a function of the existing property boundaries. Each member, of course, has the ability to keep or allow outsiders on his or her property to partake of the resources they have created. Even if all landowners grant each other access to their property, the right to exclude non-members remains intact. Thus, resources created in common among the members are exclusive to the members. And, although there may be some resources that spill beyond the landowners' boundaries, those that are found within it remain exclusive to the members.

the management of common pool resources: (1) provisioning problems and (2) allocation problems.[76]

Provisioning problems are primarily concerned with the production and maintenance of the resource system[77] that the individuals within a group will use, and they "may occur on the supply side, on the demand side, or on both sides."[78] Supply-side provisioning problems are "related to the construction of the resource itself and its maintenance."[79] Demand-side provisioning problems "involve regulating withdrawal rates so that they do not adversely affect the resource itself."[80]

Provisioning problems in this context initially involve a choice regarding what exactly the group wants to produce together. The choices are limited only by the willingness of the participants. Practically, however, landowners have little reason to cooperatively produce things they could produce as effectively alone. Thus, the likely candidates for cooperation are resources that they are unable to produce alone or resources that they could produce better together than they could apart.[81]

The clearest candidate for provisioning is wildlife, simply because cooperation is necessary in many cases. With wildlife resources, a landowner will likely not be able to do much within his or her own boundaries. Landowner cooperation will be necessary, for example, to produce species that have home ranges larger than any single landowners' boundaries or to create a suitable array of habitat types. Thus, willing participants must contribute to wildlife production by collectively managing their land to provide a habitat suitable to the species or array of species they seek to provision.

Additional prospects for cooperative production include the creation of buildings, campgrounds, hiking trails, and horseback-

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76. *Id.* at xviii.

77. *Id.* at 30 ("Resource systems are best thought of as stock variables that are capable, under favorable conditions, of producing a maximum quantity of a flow variable without harming the stock or the resource system itself.").

78. *Id.* at 49.

79. *Id.*

80. *Id.*

81. I use the terms "as effectively" and "better" in lieu of terms like "at a lower cost" and "more efficiently" to avoid a singular focus on production economics. To be sure, economic efficiency is a key variable in these decisions, but communities my find other reasons to cooperate.

riding trails. For these items, collective action may be necessary or better in light of significant up-front costs that exceed any individual's capacity. Collective action may also be required for things like trails if their value increases disproportionately as their length is extended across individual parcels.

Once a group decides what to provision, it must decide who will bear the costs of provisioning and how to divide these among participants. For instance, increasing the grassland bird population in a large landscape may require significant changes to grazing practices on one landowner's property, but fairly marginal changes to another landowner's property. Additionally, the cost each landowner experiences may vary from year to year. Cooperating landowners will need a means of determining who will bear what provisioning costs.

All of these problems fall within the realm of supply-side provisioning problems because they relate to the creation and maintenance of the resource system.[82] Significant demand-side provisioning problems are likely to arise as well. For instance, if a group of landowners cooperates to produce wildlife, it will need to avoid overuse. The clearest example of this problem involves consumptive uses[83] of wildlife, like hunting. Without a means of guarding against consumptive overuse, individual actors within the cooperating group may harm the resource base. This would be a classic example of Hardin's famous tragedy of the commons. But by structuring rules for individual use, land users can avoid overconsumption.[84]

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82. *See id.*

83. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE, 1243, 1248 (1968).

84. Many states allocate the consumption of certain species through hunting laws--a reflection of the common property (or public property) system we have used to manage wildlife for so long. *See, e.g.*, 163 NEB. ADMIN. CODE Ch. 4 - Wildlife Regulations (2010), *available at* http://www.sos.ne.gov/rules-and-regs/regsearch/Rules/Game_and_Parks_Commission/Title-163/Chapter-4.pdf.
Such laws play a key role in maintaining the wildlife population in the face of common ownership. However, in some instances, the state's allocation determinations may not be sufficient. For instance, problems may arise if the state's allocations are made with reference to geographic boundaries that are much broader than the cooperating landowners' boundaries. For example, consider a group of cooperating landowners that successfully attracts hunters with state-issued permits that were issued by calculating the safe yield of a species at a state level.

Nature-based activities like hiking, camping, and horseback riding will also raise demand-side provisioning problems if the parties have cooperated to produce the facilities supporting them, like trails, supporting structures (barns, trailheads, etc.) or campgrounds. Again, the parties should govern use in a way that diminishes the prospect of damage to the resource, like overcrowding at campgrounds or on trails.

Allocation problems—Ostrom's second category—involve allocating resource units.[85] These problems arise when multiple parties carry on activities that use the resources available to group members.[86] Solving allocation problems "avoid[s] rent dissipation and reduce[s] uncertainty and conflict over the assignment of rights."[87]

Allocation problems become especially interesting in the case of mobile resources—resources like wildlife that cross property boundaries. Such resources are difficult to allocate because "spatial and temporal distributions of resource units frequently are heterogeneous and uncertain."[88] Limiting each participant to use on his own land may prove inadequate. Thus, landowners may need to grant each other access their properties for the purpose of using the wildlife resources they have created. An alternative would be to create a compensation system whereby those who cannot get access to mobile resource are allocated a share of the benefits.

Within the landowners' boundaries, over-consumption at a local level could occur without having an adverse impact at the state level. Under such circumstances, the parties must determine how many animals of a given species can be hunted without harming the local population, despite the state's role in allocation.

85. OSTROM, *supra* note 69, at 30 ("Resource units are what individuals appropriate or use from resource systems. . . . The distinction between the resource as *a stock* and the harvest of use units as a *flow* is especially useful in connection with renewable resources.").

86. *See id.*

87. Ostrom explains rent dissipation as follows:

> Rents are dissipated whenever the marginal returns from an appropriation process are smaller than the marginal costs of appropriation. Rent dissipation can occur because too many individuals are allowed to appropriate from the resource, because appropriators are allowed to withdraw more than the economically optimal quantity of resource units, or because appropriators overinvest in appropriation equipment (e.g. fishing gear).

Id. at 48.

88. *Id.*

Mobile resources also pose problems for non-consumptive uses. For example, hiking, camping, and horseback riding may be more valuable when wildlife is present. If wildlife appear on some properties and not others, access for these activities should be allocated among the parties who created the wildlife resource, or a compensation system should be created.

Similarly, access to facilities supporting nature-based activities like hiking, camping, and horseback riding should be allocated to avoid conflicts concerning their use and guard against over-investment by individual participants.[89]

Provisioning and allocation problems are also clearly linked to one another. People will be unlikely to continue participating in collaborative endeavors if they bear more than their share of the provisioning costs, or see others getting more than their share of the allocation benefits.[90] What participants view as "their share" will likely turn on the relative contribution each has made to the enterprise in relation to their return.[91] Thus, those who experience high costs should be given a higher proportion of the benefits. And those who experience very little cost should be given a relatively lower proportion of the benefits.[92] Such proportionality is necessary to a continued cooperative effort.

C. Reconfiguring Property Boundaries and Cooperating

With cooperation and its problems in mind, one can consider the legal tools available for facilitating nature-based entrepreneurship. Many of the problems facing nature-based entrepreneurship lie in our present use of the property system, so I look to the ability of property law accommodate solutions. Because a solution can be found in property law, I conclude that creating broad landowner rights and fragmenting a landscape with property boundaries do not necessarily lead to a tragedy of fragmentation. Property law is flexible enough to create suitable boundaries for nature-based entrepreneurship.

The following discussion explores the "common-interest community" as a way in which property law can be used to

89. *Id.*

90. *Id.* at 92.

91. *See id.*

92. Presumably, of course, in all cases benefits will outweigh costs for participants over time.

reconfigure property boundaries and facilitate these emerging businesses. Sub-section one describes the "common-interest community" generally. While most commonly found in urban areas as a means of creating and selling communities, these associations have attributes that could deal with the provisioning and allocation problems identified above. Sub-section two applies this structure to a group of nature-based entrepreneurs. Sub-section three explores institutional design principles that should guide those creating a common-interest community, as well as potential solutions to the collective-action problems that may arise. Sub-section four discusses additional beneficial uses of common-interest associations—a typical feature of a common-interest community. Sub-section five briefly explains how the property-law solution discussed in this Article relates to other means of carrying out the cooperative effort.

1. The Common-Interest Community

The "common-interest community" is a generic term for what most laypeople know as the homeowners' association used in many residential developments.[93] These communities are founded upon rights and duties that inhere in the title to real estate and affect the property owners individually and collectively.[94] The management and oversight of these rights and duties, among other things, is often carried out through a governing association.[95]

The foundational rights and duties of a common-interest community are created through servitudes. The term "servitude"is a "generic term that describes legal devices private parties can use to create rights and obligations that run with the land."[96] In essence, servitudes move rights from one parcel of property to another parcel or parcels of property.[97] This tool allows property owners to reconfigure boundaries, moving conceptual slices of property among

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93. *See* RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 1.8 cmt. C (2000); WAYNE S. HYATT & SUSAN F. FRENCH, COMMUNITY ASSOCIATION LAW: CASES AND MATERIALS ON COMMON INTEREST COMMUNITIES 3-4 (2008).

94. HYATT & FRENCH, *supra* note 93, at 6; RICHARD R. POWELL, POWELL ON REAL PROPERTY, Ch. 54 & 54A (Michael Allan Wolf ed., 2010).

95. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 1.7 cmt. a (2000).

96. *Id.* at § 1.1 cmt. a.

97. *See* Lee Anne Fennell, *Contracting Communities*, 2004 U. ILL. L. REV. 829, 842-46 (2004).

the parties to the agreement.[98] The slices become part of the property each landowner owns; they are a reconfiguration of the rights and obligations attending property ownership, not simply obligations and rights that bind property owners.[99] As the *Restatement (Third) of Property* puts it, "[r]ights and obligations that run with land are useful because they create land-use arrangements that remain intact despite changes in ownership of the land."[100]

The servitudes of a common-interest community obligate the owner to engage in and refrain from certain land uses.[101] For instance, in the urban setting, the construction and maintenance of the dwelling is often regulated, with an eye toward the aesthetic impact of the structures built on the property.[102] Such regulations place burdens on individual parcels of real estate, but they also benefit the community as a whole. Each individual parcel often contains the same restrictions, reciprocally benefitting each of the other parcels in the development.

The servitudes also may create a common-interest association and vest it with authority to hold common property,[103] provide services,[104] perform administrative functions, enforce the servitudes, and raise revenue for its operations through fees assessed on property owners.[105] The association can be formalized as a separate legal entity (for example, as a limited liability company, corporation, or trust) or it can exist as an unincorporated association.[106] In any event, the servitudes will vest each member of the group with membership in the association and attendant voting authority as an incident of their property ownership.[107] The association's operations are

98. *Id.*

99. *Id.*

100. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 1.1 cmt. a (2000).

101. HYATT & FRENCH, *supra* note 93, at 14.

102. *Id.* at 345.

103. Bike trails, parks, and exercise facilities are typical examples of association property held for the benefit of the owners in common.

104. Trash collection, snow removal, and lawn care are examples of services performed by an association for its members.

105. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 1.8 cmt. c (2000).

106. RICHARD R. POWELL, POWELL ON REAL PROPERTY, Ch. 54A-18 (Michael Allan Wolf ed., 2010; HYATT & FRENCH, *supra* note 94, at 32-33.

107. HYATT & FRENCH, *supra* note 93, at 14.

governed by documents such as articles of incorporation and bylaws, depending upon the legal form the association takes.[108]

In the urban setting, common-interest communities are created by developers in conjunction with the subdivision and development process, long before individual parcels are sold and developed.[109] After servitudes are declared and the association documents created, landowners join the community by buying a parcel.[110]

2. Using Common-Interest Communities to Solve the Boundary Problem

Given the variety of factual scenarios that will emerge in the grasslands setting and the various preferences participants will have, it is difficult to offer a vision of how a particular common-interest community should look.

The specific parameters of a common-interest community are, of course, driven by the needs of the parties creating it. These clients have particular goals, values, experiences, and tolerance levels that impact how their community should be structured. The lawyer's job is to provide a solution that suits their clients' needs and helps them achieve their goals, using suitable legal tools. What the lawyer creates must have the features they need without accessories that are useless or, worse, problematic.[111] The problems identified above help the lawyer better understand what his or clients need.

Before explaining how a common-interest community can meet these needs, one preliminary matter merits consideration. The use of a common-interest community is somewhat atypical outside of the residential real-estate market where a developer designs the community's initial terms and people join by buying lots within the project. On a rural landscape like that under consideration, there will be no front-end involvement of a developer and subsequent purchase by individual members. While that progression could occur on rural landscapes, the point of this Article is to explore legal tools that would enable existing landowners to pursue nature-based enterprises.

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108. *Id.* at 14, 32-33.

109. *Id.* at 31-32.

110. *Id.* at 14.

111. *See also* HYATT & FRENCH, *supra* note 93, at 38-40 (discussing the attorney's role).

There is, however, reason to believe that a common-interest-community approach could be adapted to nature-based entrepreneurship. In this context, a common-interest community would create a common enterprise that provides secure commitments, produces resources, and allocates resources among landowners. Thus, a common-interest community in this setting is less like a residential development and more like creating irrigation facilities, building cooperative storage facilities for agricultural commodities, or creating rules to govern the use of an inland fishery or common pasture.[112] All of those enterprises are common examples of people cooperating to produce and use resources they could not create (or could not create as effectively) on their own, without the front-end involvement of a developer. Those enterprises did not involve the use of common-interest communities to collaborate, but they did not face the same property boundary problem, and they did not involve the same sort of land-based resources. Given those two aspects of collaboration in this setting, a common-interest community may be an appropriate and well-suited tool for the task of nature-based entrepreneurship, even if its use here is somewhat atypical.[113] At the very least, a creative and careful lawyer can certainly fashion an appropriate solution..[114]

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112. *See* Rose, *supra* note 50, at 178-79. Rose mentions other examples and notes that common-law regimes like nuisance law and riparianism are common-property regimes, "It has only been a failure of our imagination that has kept us from seeing these judicially created regimes for what they are--common property regimes involving emergent resource uses, including only imprecisely specified participants." *Id.* at 178-79. *But see* RUHL, *supra* note 1, at 109 (concluding that the common-law common-property regimes have not been adapted to take ecosystems services seriously).

113. There are others that may work as well. Those options are explored *infra* section II.C.45.

114. Ruhl and his co-authors appear to disagree. RUHL, *supra* note 1, at 110, 158-68. Ruhl demonstrates that "social norms" are an insufficient means of making meaningful headway with regard to ecosystem services. *Id.* at 158-68. But at other times he acknowledges the ability of landowners to come together and effectively order their arrangement. *Id.* at 110. Perhaps my focus on private law (other than the common law) and institutional design adds something to that work, exploring the inside of these arrangements and the tools available. But, as Ruhl states, outside the boundaries of the newly created commons, property law offers little protection.

One problem identified above is the need for secure commitments among participants.[115] Using servitudes should provide an important level of security. Because a servitude binds the land (not just the owner),[116] it should guard against defection and provide each landowner with the sort of credible commitment that encourages individual investment.[117] Given the durability of servitudes, however, establishing a termination date or a renewal obligation seems appropriate. Perpetuity, of course, raises legal concerns in some states. But even long-term encumbrances can become problematic if the endeavor waxes and wanes. For instance, times change and some obligations may become ill-suited to a given enterprise. Without a termination date, or at least the opportunity to consider renewal, the parties would be bound to the obligation for the remainder of the term. Of course, longevity has benefits too. The parties will want to select a time frame within which their hopes and expectations can materialize.

Beyond the general utility of servitudes, the details of how to vary property boundaries will depend on what the landowners have chosen to provision and allocate. As for supply-side provisioning problems, the servitudes should establish the rights and obligations necessary to produce the resources they will hold in common. With regard to wildlife, for instance, each owner should agree to manage his or her land in a way that enhances and supports the wildlife population. The benefits of such an obligation should be made to run to the other, similarly encumbered properties. With regard to jointly created trails and campgrounds, the parties should configure construction, maintenance, and operation obligations.

Demand-side provisioning problems should also be addressed through servitudes. Thus, the servitudes should place appropriate limitations on the number of visitors, the amount of game that can be harvested, the timing and intensity of use activities like hiking, horseback riding, camping, and so on. The ultimate goal will be to protect the resource system from damage.

Allocation problems should also be addressed in order to give the parties reliable expectations regarding the use of resource units and avoid conflicts among users over their use. If access is necessary to

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115. *See supra* notes 69--71 and accompanying text.

116. *See supra* notes 96-100 and accompanying text.

117. *See* OSTROM, *supra* note 69, at 43-44.

effectively allocate temporally and spatially complex common-pool resources, the servitudes should grant each landowner access to each other's properties to conduct use activities.

Provisioning and allocation issues may become relatively complicated in the grasslands setting. In other settings, deciding the rights and obligations necessary to make the project work is not as difficult. It is not particularly difficult, for instance, to create restrictions limiting the types of grass to be planted in lawns or limiting the height of, or the materials to be used in, fences. Both correspond to the idea of beauty (or the potential for profit) employed by those drafting the servitude.

Matters are not that simple with managing grasslands wildlife production and using those lands for ranching and nature-based activities. The sciences of grassland management, wildlife biology, and ecology will be important, but there is a great deal of uncertainty concerning what land uses will be beneficial to the overall effort. Intensive grazing, controlled burns, species introduction, stocking ratios, fencing, fence removal, and a variety of other aspects of land management will be important. And operating at a large scale may mean that some lands must be treated differently than others because of their physical location or ecological significance. Inventorying species will be an important step in making management choices and, depending on the data, the details of provisioning and allocation solutions may need to change over time.

Further difficulties may ensue from the uncertain nature of the returns some activities may yield, as well as uncertainty concerning the level of use that pooled resources can sustain. Indeed, experimentation and adaptive management may be the only truly workable approaches to effective provisioning and allocation in this context.[118] Unlike the residential property setting, where manicured lawns and no-wood fences for every parcel in the development correspond to a collective view of beauty or have been proven in the marketplace to enhance value,[119] the outcomes here are more uncertain and the choices associated with generating those outcomes can be complex.

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118. *See* Nick Salafsky et al., *Improving the Practice of Conservation: A Conceptual Framework and Research Agenda for Conservation Science*, 16 CONSERVATION BIOLOGY 1469 (2002); Karkkainen, *supra* note 68, at 199-206.

119. *See* HYATT & FRENCH, *supra* note 93, at 5.

The complexity can be dealt with by engaging experts and fashioning the servitudes at a highly detailed level that spells out the practices each landowner must perform and his or her allowed level of use. This can provide certainty to participants, but the prospect of change or failure must be adequately considered. To do so, at the least, an amendment mechanism should be employed.[120] That amendment mechanism would give landowners the power to amend the servitudes under a set of procedures spelled out in the servitude. The requisite quantum of owners involved in the amendment process could vary from majority rule (by participant or by acreage or whatever) to unanimity.[121] Again, the choice would be one for the group to make in creating their common-interest community.[122]

However, a further level of complexity emerges. As mentioned above, provisioning and allocation decisions must consider the contributions and returns of other members.[123] Thus, the provisioning and allocation terms contained in a set of servitudes should be crafted in a way that ensures proportionality between costs and benefits. Achieving this congruence between relatively complicated provisioning and allocation choices involves a further level of difficulty. For instance, by what metric should a provisioning contribution be judged (e.g., by the environmental benefits flowing from the improvement, the costs associated with it, or both)? Determining the value of allocations could involve similarly difficult questions. Both difficulties are present when one seeks to maintain proportionality.

Again, an amendment mechanism would be an important means of maintaining proportionality between costs and benefits going forward. However, given the potential complexity of the rights and duties at issue and the need to maintain proportionality, it may not be feasible to state the provisioning obligations and allocation rights at a high level of detail. And even if they can be stated at the outset, there will likely be a need to continually adapt provisioning measures and adjust allocations. Indeed, enunciating standards or goals (as opposed to rules and concrete obligations) may be nearly all that can

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120. *Id.* at 455-57.

121. *Id.* at 456-58.

122. *See, e.g.*, RESTATEMENT (THIRD) OF PROP: SERVITUDES § 6.10 (2000) (providing default rules that can be displaced by express statements in the declaration).

123. *See supra* notes 90-92 and accompanying text.

be set forth with any certainty at the outset. Moreover, the creation of obligations and rights does little to ensure enforcement and does not give the parties any sort of a financing mechanism to help pay enforcement or management costs and hire assistance.

A common-interest association can solve many of these problems or at least give the parties a means to address them. Using an association helps further unify cooperating landowners within a new "external special-purpose boundary,"[124] providing them with an institutional framework through which they can nimbly make the provisioning and allocation decisions necessary to their enterprise.[125]

An association can be empowered and limited in whatever way the parties deem appropriate. For instance, the association could be vested with the power to hire habitat and wildlife experts to seek input on effective and appropriate wildlife and habitat measures, thus helping the parties deal with the difficulties they may encounter in managing a landscape for wildlife production. More importantly, an association can allow parties to frame obligations at a fairly broad level. That is, the servitudes can provide the association with discretion to determine what landowners must do in order to attain their collective goals, leaving sufficient leeway to engage in an adaptive effort. By vesting landowners with membership in an association that will, in turn, administer servitude obligations within the group, the landowners can free themselves from the need to enunciate fine-grained servitudes spelling out each participant's rights and obligations. Rather, the association's power to create rules concerning provisioning and allocation can be set forth in the servitudes along with an obligation for each landowner to abide by those rules. In essence, then, the landowners will create an entity through which they may govern themselves, creating and adjusting the rights and duties necessary to adequately provision and allocate resources and maintain proportionality between costs and benefits for individual participants.

A similar approach can be found in design standards for new houses in residential common-interest communities.[126] In some instances, the servitudes impose specific requirements on landowners

124. Ellickson, *supra* note 65, at 1334.

125. In broad terms, these associations implicate the lessons of good government. Procedure, minority rights, decision-making standards, and the like are all elements of good government. They are elements of good governance as well.

126. HYATT & FRENCH, *supra* note 93, at 345-47.

within the development to use certain materials or build to a minimum size. However, beyond those parameters, care must be taken to ensure that new homes enhance (or do not diminish) the value of surrounding properties. As a result, many servitudes for residential common-interest communities empower the association to review plans for proposed structures and require landowners to get approval before they start building. Standards are set at the developer's chosen level of specificity, and it is good practice to define the standards in terms that are as concrete as possible. But to a greater or lesser extent, the association has the discretion to approve proposals based on those standards.[127] The same structure can be employed in the grasslands setting.

The question of how much discretion to give the association—how broadly or narrowly to frame the servitudes that the association will administer—depends in large part on the level of control each individual member will have and the community values they seek to implement.[128] Control will be determined though (1) the voting rights that each member has and (2) the quantum of votes necessary to take a particular action.[129] The servitudes will make each landowner a member of the association and give him or her voting rights.[130] The allocation of voting rights need not, however, be "one person, one vote." Perhaps each member should have equal say. But a group could easily conclude that each member's share of control should be determined according to the acreage he or she holds. Or perhaps each member's share of control should depend upon an environmental benefits index that would, in turn, provide a further incentive for the creation of such benefits on the lands involved.[131] Additionally, the

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127. *Id.* at 345-89 (describing the practice of common-interest communities and design standards)

128. *See id.* at 34-37 (providing a thorough description of community creation in the development process).

129. *See id.* at 32-34.

130. *Id.* at 32.

131. A common example of an environmental benefits index is that employed in the Conservation Reserve Program to rank offers for enrollment. *See generally* FARM SERV. AGENCY, CRP SIGN-UP 26 ENVIRONMENTAL BENEFITS INDEX (May 2003), *available at* http://www.fsa.usda.gov/Internet/FSA_File/crpebi03.pdf. The Farm Service Agency quantifies practices like habitat cover, wildlife enhancement, geographic significance, and works them into a formula to identify the most environmentally beneficial lands proposed for enrollment. A similar approach could be adopted in a common-interest community.

percentage of voting interests necessary to take a particular action could vary from a bare majority to unanimity and could vary according to the type of decision at issue.

A common-interest association's revenue authority could also be useful. As mentioned above, servitudes in a common-interest community often involve an obligation to pay money to an association to fund association activities.[132] The servitude may spell out (or the association may be given the authority to determine) the amount of the fee, the metric for its calculation, and the purposes for which the revenue may be spent.[133] The revenue will help the association finance its activities and provide the members with a way of sharing costs at a communal level. Obviously, it will take money for the association to undertake certain improvements. For instance, the removal of invasive species could be financed through the association. Each owner's payment may also solidify his or her stake in the operation, especially in conjunction with the expectation that the funds will be spent on improvements or maintenance that benefit the landowners collectively.

The revenue mechanism is also a useful tool for keeping costs and benefits proportional for individual participants, For instance, compensation from association revenue for disproportionate landowner provisioning (which benefits the association as a whole) can be used to keep provisioning and allocation congruent. Suppose, for example, that one area of land within an association needs to undergo a controlled burn, but the loss of acreage will be particularly detrimental to one or more ranchers. Association dues would be used to compensate the individual rancher[134] without reallocating resource units to maintain proportionality.

Association dues could also be calculated from resource-based income and used to compensate members for their provisioning activities.[135] perhaps This sort of a fee structure would redistribute

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132. *See* HYATT & FRENCH, *supra* note 93, at 271-343.

133. *See id.* at 287-91.

134. Lost income, of course, is just one metric by which disproportionate costs can be detected. Others would include comparing the value of a member's provisioning activities to the value of a member's allocation. Determining those values can become a complex task, but an association can be given the discretion to experiment as it determines when and how its revenue should be distributed.

135. Identifying the amount of compensation would also involve the selection of a metric for valuing provisioning contributions. For instance, out-of-pocket

some members' income to those members who contributed to the enterprise but were unable to realize the benefits, perhaps due to a lack of access to those resources. This would also keep benefits and costs proportional among the members and could be used in instances where landowners are unwilling to give their neighbors access to their properties.

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In sum, the possibilities are numerous, but the general goal of using a common-interest community, complete with a suitably empowered association, is to vary a fragmented landscape's property boundaries with binding and credible servitudes that create a governance structure to collectively administer rights and obligations. In the grasslands context, the utility of this property-based, democratic, private–governance structure is similar to that found in other contexts: it is a means for collective choice though which participants can achieve common goals. Property law here, as elsewhere, gives landowners the flexibility to create the boundaries and institutional structure necessary to meet those goals on the necessary scale.

3. Institutional Design, Collective Choice, and Common-Interest Associations

Essentially, a common-interest association in this context would be an institution where cooperating landowners can govern the use of common-pool resources. As such, the analysis would not be complete without considering Ostrom's principles of institutional design. Ostrom has identified a series of design principles that she has observed in many long-enduring self-initiated institutions for collective action among relatively small groups of individuals:

> 1. Clearly defined boundaries. The boundaries of the resource system (e.g., irrigation system or fishery) and the individuals or households with rights to harvest resource units are clearly defined.
> 2. Proportional equivalence between benefits and costs. Rules specifying the amount of resource products that a

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expenses could be used to determine the value of provisioning contributions, but that amount could also be reduced if the practice benefits the landowner individually.

> user is allocated are related to local conditions and to rules requiring labor, materials, and/or money inputs.
> 3. Collective-choice arrangement. Many of the individuals affected by harvesting and protection rules are included in the group who can modify these rules.
> 4. Monitoring. Monitors, who actively audit biophysical conditions and user behavior, are at least partially accountable to the users and/or are the users themselves.
> 5. Graduated sanctions. Users who violate rules-in-use are likely to receive graduated sanctions (depending on the seriousness and context of the offense) from other users, from officials accountable to these users, or from both.
> 6. Conflict-resolution mechanism. Users and their officials have rapid access to low-cost, local arenas to resolve conflict among users or between users and officials.
> 7. Minimal recognition of rights to organize. The rights of users to devise their own institutions are not challenged by external governmental authorities, and users have long-term tenure rights to the resource.[136]

A common-interest association can observe, and should observe, these principles. Ostrom's clear-boundaries principle (her first) states that the boundaries of the resource system must be clearly defined and the individuals who have rights in the resource system must be identified. When the parties create a common-interest association, they will be altering clearly delineated property boundaries and enunciating what the scope of their collaborative effort is. Thus, it should meet this criterion.

As I have mentioned already, the proportional equivalence principle (Ostrom's second) can be met and probably can be observed more easily through the association and a revenue device. In addition,

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136. OSTROM, *supra* note 69, at 90; ELINOR OSTROM, UNDERSTANDING INSTITUTIONAL DIVERSITY 259 (2005). Ostrom's eighth design principle—that multiple layers of nested enterprises be responsible for appropriation, provisioning, monitoring, enforcement, conflict resolution and governance activities—is most often observed in large complex systems. *Id.* I therefore omit this principle from the following discussion, but it should be noted that a layered or federal structure may emerge as necessary if a collective effort grows to a large enough size or if there is a need for coordination among many groups of cooperating landowners.

active, accountable monitors, graduated sanctions,[137] and conflict-resolution[138] (Ostrom's fourth, fifth, and sixth principles, respectively) can be built into the governance documents of the association or observed in the association's operations.[139]

Ostrom's collective-choice principle (her third) and minimal-recognition principle (her seventh) remain. I take up the minimal-recognition principle in Part III, below. Her collective-choice principle merits extended attention here.

As an initial matter here, a common-interest association, by definition, has the sort of stakeholder participation that Ostrom observes in her collective-choice principle: participants affected by allocation and provisioning rules are included in the group who can modify these rules. All landowners are affected by the rules they create through the association and they have the power to change those rules when needed.[140]

However, collective-choice problems can emerge within such groups. As with any organization, an opportunity exists for those in control to take advantage of those with a minority stake. Thus, one challenge facing the parties is to create a structure in which controlling participants are less likely to expropriate benefits from the minority.

There are at least six potential checks on this sort of opportunism. The first is the ability to exit the arrangement. For example, termination provisions could be used to protect minority rights. But if the minority is given such a tool, then the minority use that tool to

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137. The RESTATEMENT explicitly recognizes the ability of common-interest associations to "adopt reasonable rules and procedures to encourage compliance and deter violations." RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 6.8 (2000).

138. Judicial enforcement of the obligations and rights created in a private law setting is the default means of resolving conflicts in the United States. Such a forum can be time consuming and often costly, but it is often local given the way state courts are organized. Alternative dispute resolution techniques, like arbitration, are an alternative. Additionally, the servitudes could set up a dispute resolution process within the association. That, in turn, could be designed with low-cost and rapid-response considerations in mind. Dispute resolution could also occur informally, which may be likely in this setting.

139. *See* HYATT & FRENCH, *supra* note 93, at 423-24.

140. Observing this principle also helps deal with the problem of defection. To the extent a landowner is satisfied with the process (if not the result) and is assured of a continuing voice in the association's operation, he or she is more likely to join the collective effort, remain engaged, and resist the temptation to defect.

expropriate undue benefits from the majority. Another form of exit is each individual's ability to sell the land to a new owner.[141] But exit through sale may not be a suitable exit strategy because buyers may discount their purchase price in light of the problems they will encounter. Thus, selling the property does little to protect the seller from majoritarian overreaching.

The second check is to limit the level of association discretion on certain matters. Perhaps the parties will choose to limit the governance authority of the association in relation to provisioning and allocation questions. For instance, the parties may create a baseline allocation for association members, a maximum provisioning obligation, and cap the revenue obligation in a way that limits the prospect or the magnitude of overreaching.[142] But spelling out such matters in detail poses the problems I've discussed above; the parties may need more flexibility.

The third check is to manipulate the percentage of votes necessary to take action on provisioning and allocation questions. Unanimity would, of course, avoid majoritarian overreaching, but this creates the possibility of minority holdouts who may overreach. Indeed, deadlock could ensue.

The fourth is similar to the third: the parties could manipulate the allocation of voting power. Perhaps a creative lawyer can fashion a mechanism vesting control among members based on their relative contributions to the enterprise. But there are significant metric problems associated with converting contributions to votes. And even if control is always vested in those who have experienced the most costs, those members will still be able to extract disproportionate benefits from the minority (though, perhaps, not as disproportionate).

The fifth check addresses the longevity of the enterprise. Perhaps over the long term, power shifts, contributions, and benefits will balance despite a disconnect between costs and control. But the

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141. Unlike with closely held corporations (or similar entities), where a market for the individual's interest may not exist, the property foundation of the interests in these enterprises may increase the probability of a market-based exit.

142. Servitude law would be particularly adept at this because servitudes are not generally subject to majoritarian amendment. Obligations created by servitudes in common-interest communities, by default, cannot normally be materially changed without the assent of all beneficiaries. *See* RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 6.10 (2000).

parties have no assurance that will happen, nor do they know the time frame in which it might happen. Moreover, controlling interests could use their power to keep a reallocation from occurring.

The sixth, and perhaps the most likely, check is the social settings in which these enterprises are likely to emerge. Perhaps landowners will be as concerned about what their neighbor gets as they are about what they get. Such a phenomenon is not unheard of within close communities or small enterprises. But social ties often cut both ways. Neighbors fall out of favor with one another and seemingly unrelated conflicts can trickle into association governance and decision-making.[143]

Notably, Ostrom's principles are, in part, an answer to the collective-choice problem.[144] Her principles are derived from observations of institutions that have endured over the long term and largely avoided the overreaching problem, at least to the extent it would either inhibit creation or tear apart the endeavor. But even she acknowledges that explaining how new institutions come to be and how they adapt in the face of overreaching opportunities is difficult. She agrees that it involves "establishing trust and establishing a sense of community" that deserves study "not in protest against the notion of rational choice, but rather in an effort to understand how rationality on the part of individuals leads to coherence at the level of society."[145] And in her observations of field settings, she explains the emergence of institutions as occurring at multiple levels, involving incremental and sequential changes to constitutional rules (governing processes of formulation, governance, adjudication and modification), collective-choice rules (governing policy-making, management, and adjudication), and operational rules (governing processes of appropriation, provisioning, monitoring, and enforcement) in various arenas.[146] There is, of course, much more to

143. *See* Mark Cooney, *Why is Economic Analysis So Appealing to Law Professors?*, 45 STAN. L. REV. 2219, 2219-21 (1993) (noting instances of feuding in non-cooperative groups).

144. OSTROM, *supra* note 69, at 185-216 (explaining how the institutions with her principles solve the problem of institutional supply, credible commitment, and mutual monitoring in conjunction with "fallible, norm-adopting individuals who pursue contingent strategies in complex and uncertain environments").

145. *Id.* at 43 (quoting Robert H. Bates, *Contra Contractarianism: Some Reflections on the New Institutionalism*, 16 POLITICS AND SOCIETY 387, 399 (1988)).

146. *Id.* at 52-53.

Ostrom's framework, but, in the end, she acknowledges something very important about her principles:

> I do not think it is possible to elucidate necessary *and* sufficient principles for enduring institutions, as it takes a fundamental willingness of the individuals involved to make any institution work. No set of logical conditions is sufficient to ensure that all sets of individuals will be willing and able to make an institution characterized by such conditions work.[147]

In the end, there is no prescription for dealing with this problem. At best, participants should discuss the issue, consider the utility and drawbacks of different options, and decide how they want to deal with it in designing their institution.

4. Doing More with Common Interest Communities

Thus far, this Article has focused on the common-interest community and its attendant association as a collective governance mechanism. Through such an arrangement, multiple landowners can come together to produce common-pool resources and decide upon the allocation of those resources in a way that creates a new special purpose boundary. I have assumed that each landowner would utilize the allocated resources to provide income to their own operations. However, several permutations can arise once the landowners start collaborating through a common-interest community.

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147. *Id.* at 229 n.36. There is at least some data suggesting such a motivation may be present in rural populations.

> [L]and figures into agriculturalists' utilitarianism as more than a means to money. Sustaining independence, tradition, and community relations matter too. This works against environmentalism when, for example, the tradition relates to wiping out a species like the prairie dog; but it is also cause for hope, insofar as people who relate to land solely as a source of profit are wont to shirk in cooperative conservation ventures. Those who value community highly would seem the least likely shirkers.

See Elmendorf, *supra* note 45, at 443. For an account of rural stereotypes, including communitarian assumptions, depicted in judicial opinions, see Pruitt, *supra* n. 2, at 225-33. It remains to be seen whether bringing a profit motive to conservation can simultaneously take advantage of agriculturalists' liberal and communitarian tendencies.

For instance the discussion above assumes that the servitudes will benefit and burden each landowner reciprocally and that the association would decide on the finer points of provisioning and allocation. However, another option would be to make the association the beneficiary of all the obligations placed on the properties. Thus, the association would have access to the properties for hunting, hiking, wildlife viewing, camping, or other uses of the provisioned resources. Under this sort of an arrangement, the association could operate more as a business venture and distribute the revenue to the association's members. In other words, the allocation function of the association would turn from managing allocation rights to distributing earnings to the members.[148]

One could also envision an arrangement in which the association contracts with a third-party outfitter to use the resources that have been effectively pooled at the associational level. The payment such an outfitter would make to the association would then be distributed to the association's owners.

Common-interest associations also often hold common property—land or structures owned collectively by the group through the association.[149] Such an of arrangement may be helpful in this setting if the landowners were to collectively acquire more land or jointly build facilities to assist them in their efforts.

The association can also act as a focal point for dealing with other entities. For instance, the association could compete for grants focused on creating or enhancing wildlife habitat. A group of landowners operating through an association that has a secure level of control over a vast acreage may compete very well for such funding.

5. Other Legal Tools

Common-interest communities and their associations are, of course, only one means by which landowners can collaborate. They are a particularly appropriate means given the property boundary problem and the way in which servitudes and an empowered

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148. This kind of collective ownership would also seem to be more clearly a risk management strategy that producers could use to guard against geographically isolated production failures. *Cf.* Ellickson, *supra* note 65, at 1341-42 (indicating that the allocation of the benefits of collective provisioning could qualify as a risk management technique).

149. HYATT & FRENCH, *supra* note 93, at 6.

association can modify property boundaries. But there is a spectrum of ways to accomplish the same ends, ranging from purely informal arrangements among landowners to governmental involvement. Below, I describe the different approaches landowners could take, briefly mention a few benefits and drawbacks of each, and discuss the benefits of formalizing cooperation through private law tools.

In purely informal arrangements, landowners customarilymanage their lands for the presence of wildlife and allocate access for hunting, open lands for camping, and so on. Such customs may extend to both provisioning and allocation issues. However, in such a setting there is no formal means (e.g., resort to the courts) to enforce the land management regime or govern individual resource uses. This is not to say that such efforts are ineffective. Rather, they may be highly effective within a community with strong social ties at relatively small scales.[150] Thus, this arrangement is a viable approach to nature-based entrepreneurship.

At the other end of the spectrum is public law. Government—which represents the collective will of a particular geographic area's voters—can utilize its land to provision wildlife and open its lands to users. On private lands, governmental regulations can require owners to provision wildlife and open their lands to others, subject to constitutional limitations requiring compensation to landowners in some instances.[151] Government can also control the allocation of resources through permit requirements, controls on the size of campgrounds, land use regulations, and a variety of other methods. The prospect of direct governmental provisioning and allocation of nature-based activities on the Northern Great Plains is somewhat remote because less than twenty-five percent of this region is publicly owned.[152] Moreover, less than two percent of the land area is both publicly owned and managed for biodiversity conservation.[153] In fact, most governmental approaches in this region consist of costly land purchases, regulatory approaches that place politically unpalatable (if

150. *See generally* ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES (1991); Ellickson, *supra* note 65, at 1400. One would expect to find Ostrom's traits among such effective institutions. *See also* RUHL, *supra* note 1, at 158-68.

151. *See* U.S. CONST. amend. V.

152. Freese et al., *supra* note 34, at 71.

153. *Id.*

not constitutionally suspect)[154] wildlife-provisioning burdens on landowners, and incentive programs.[155] Both are increasingly unpopular among landowners.

In between the purely informal approach and the governmental or public-law approach is the prospect of formal collaboration among landowners using private law tools like the property-based common-interest community described above. There are, of course, other private-law tools in the lawyer's toolbox. A purely contractual approach could vary the management choices of cooperating landowners and allow them to effectively vary their property boundaries. But contract law may not be the best tool for observing Ostrom's principles. The key differences between property and contract law in this setting are property law's abilities to (1) vest the rights and duties of agreeing landowners in the real estate's title (not simply among the landowners) and (2) require the performance of the obligations in the event of breach.[156] Contract law, of course, usually places the obligation only on the parties to the contract and generally limits their recovery to monetary damages.[157] Given those limitations, property law may be a superior choice for creating long-term tenure rights in the resource system.[158]

Another private law tool is business associations law. Landowners could create a legal entity to which cooperating landowners transfer their titles in return for ownership interests in the entity. Once created, individual landowners would no longer own the real estate, but they would own shares of the entity, which would then own and manage the real estate. Provisioning and allocation decisions could be made at the entity level under the direction of management, which may or may not include owners. Using an entity would also eliminate the need for cross-border collaboration as all lands would be under a

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154. FREYFOGLE, *supra* note 5, at 97-101 (describing property rights resistance to land-health initiatives).

155. Stephanie Stern, *Encouraging Conservation on Private Lands: A Behavioral Analysis of Financial Incentives*, 48 ARIZ. L. REV. 541, 542 (2006).

156. WILLIAM B. STOEBUCK ET AL., THE LAW OF PROPERTY 470 (2000).

157. E. ALLAN FARNSWORTH, CONTRACTS 769-70 (3d ed. 1999).

158. *See* OSTROM, *supra* note 136, at 259 (principle of minimal recognition of organizational rights); *see also* Shea B. Airey, *Conservation Easements in Private Practice*, 44 REAL PROP. TR. & EST. L.J. 745, 755 (2010) (stating that a monetary remedy may be insufficient to protect the "environmental, habitat, or scenic values of land").

single owner's—the entity's—control,[159] but it would not eliminate the problems associated with collective action. Thus, the entity should observe Ostrom's design principles in its internal governance. The participants would have the ability to do so because business associations are largely contractarian. This approach, however, may not appeal to landowners who would rather own land than shares in an entity. Many farmers and ranchers may want to maintain ownership of that place they call home.

Finally, some have offered a corporate/government hybrid approach as a possibility. According to this approach, legislation could enable landowners to form a governmental entity—a special district—that is empowered to raise revenue and govern landowner activities to deal with provisioning and allocation problems.[160] Special districts are quasi-governmental, but they have aspects of a business association because they are typically created to perform a narrow function and act in a proprietary capacity. Unlike purely private-law approaches, this approach needs specific enabling legislation, which, hopefully, would observe Ostrom's principles. This approach is also unique in its ability to overcome the holdout problem—a feat that private law cannot accomplish.[161]

There are two downsides to the special district approach. The first has to do with its legislative genesis. As a legislative product, landowners would have to await enabling legislation and would be bound by the terms of that legislation. The upside of using private law is the ability to avoid awaiting the resolution of a political fight concerning environmental values in the agricultural sector. That political fight would likely involve interests external to a group of cooperating landowners and, thus, may involve obligations or rights that cooperating landowners would not want to create on their own. The second downside has to do with the consequences of avoiding

159. Stated in property boundary terms, it or expands the ownership boundary instead of creating an external special purpose boundary. *See* Ellickson, *supra* note 65, at 1334.

160. The following articles have suggested this approach: Ellickson, *supra* note 71; Elmendorf, *supra* note 70, at 529; Elmendorf, *supra* note 45; Barton Thompson Jr, *Conservation Options: Toward a Greater Private Role*, 21 VA. ENVTL. L.J. 245 (2002).

161. Elmendorf, *supra* note 45, at 428-49; Elmendorf, *supra* note 70, at 554-60 (also arguing that these arrangement would decrease transaction costs for third parties like land trusts that are seeking to assemble lands).

the holdout problem. That is, forcibly including a minority interest into the special district could have adverse consequences.

None of these tools are mutually exclusive. For instance, informal arrangements may sufficiently provide the resources that a given operation needs, but perhaps a contract is necessary to govern allocation and access. Similarly, a property-based regime may work well for a group of landowners in need of heightened provisioning, but entity or governmental involvement might be better for allocation purposes. Thus, no single approach should be taken as complete or isolated.

There are also many different legal arrangements that lawyers can create within some of the rough categories depicted above, each with different parameters.[162] For instance, the choice of a particular business association (e.g., a corporation, a limited liability company, a trust, *etc.*) may be influenced by tax consequences and the particular state's law governing such entities' operations and authorized activities.[163] Within property law, there are a number of ways to vary property rights, including, for example, conservation easements and leases. Finally, special districts are as varied as they are common.[164]

Mentioning this array of finer-grained choices helps place the common-interest community in context and elucidates how many different legal tools can be used to solve the problem of

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162. One important consideration in devising a legal strategy for collective action is to consider the capacity of the tool to accommodate the parties' needs. This is especially true given the need to observe Ostrom's principles. As among the different approaches, contract and property regimes are the most accommodating. Business associations follow closely behind. Special districts' ability to accommodate the parties' needs depends on the parameters of the legislation creating them.

163. CAROL R. GOFORTH, NAT'L AGRIC. LAW CTR., *Part I: An Overview of Organizational and Ownership Options Available to Agricultural Enterprises* (2002), *available at* http://www.nationalaglawcenter.org/assets/articles/goforth_ownership1.pdf; CAROL R. GOFORTH, NAT'L AGRIC. LAW CTR., *Part II: An Overview of Organizational and Ownership Options Available to Agricultural Enterprises* (2002), *available at* http://www.nationalaglawcenter.org/assets/articles/goforth_ownership2.pdf; Anthony B. Schutz, *Corporate Farming Measures in a Post-*Jones *World*, 14 DRAKE J. AGRIC. L. 97 (2009) (discussing entity-ownership restrictions in agriculture and evaluating them under the dormant Commerce Clause doctrine).

164. *See* OSBORNE M. REYNOLDS, LOCAL GOVERNMENT LAW 31-34 (2009).

fragmentation, but an extended discussion of the suitability of each is beyond the scope of this article. However, because of its prevalence, one additional property tool merits attention—the land trust.[165] Land trusts are similar to common -interest associations because they hold and administer servitudes -- conservation easements -- on various tracts of land.[166] The owner of the encumbered property still retains possessory rights and the underlying fee to the realty, along with the ability to use the land for agricultural or other permissible uses.[167]

Land trusts, however, would probably not be helpful for nature-based entrepreneurs. They are typically non-profit organizations—a part of the environmentalism-as-charity school of conservation.[168] In Nebraska, for example, qualified non-governmental holders of conservation easements must be charitable corporations or trusts.[169] Such an approach is generally ill suited to the sort of development I address here. Obviously, one driving force behind the effort here is to increase the profitability of the landowners within the enterprise. And, in some instances, the association may carry on the profit-making venture. In the latter arrangement, charitable status is non-existent. In the former, it is still questionable.

Regardless of the specific legal tool selected, there is a case to be made for formalizing the arrangement through private law. Politically, private law may be more feasible than a public-law approach. Clearly, the goal of environmentally sound and biologically diverse landscapes can be achieved through governmental regulation of resource use. However, even though the

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165. Airey provides an excellent legal overview of this model. Airey, *supra* note 158, at 745-822. *See* Federico Cheever, *Public Good and Private Magic in the Law of Land Trusts and Conservation Easements: A Happy Present and a Troubled Future*, 73 DENV. U. L. REV. 1078 (1995) (describing the benefits of this "private magic" and some pitfalls they may encounter).

166. Airey, *supra* note 158, at 749.

167. *Id.*

168. Federal tax treatment for donations of the underlying servitudes is also premised upon this notion of environmental charity. C. Timothy Lindstrom, *Income Tax Aspects of Conservation Easements*, 5 WYO. L. REV. 1 (2005); C. Timothy Lindstrom, *Guide to the Tax Aspects of Conservation Easement Contributions*, 7 WYO. L. REV. 441 (2007); Airey, *supra* note 158, at 759-817. To qualify for the tax break, such easements must also be perpetual, which may stifle entrepreneurship in this market.

169. Conservation and Preservation Easement Act, NEB. REV. STAT. §§ 76-2, 111-18 (2005).

goals of such an effort may be laudable, it often encounters landowner resistance, decrying governmental action as infringing upon private property rights.[170] One upside of the approach presented here is its grassroots effort at achieving good environmental outcomes in an economic system that allows producers to profit from consumer demand for these important places. In that sense, government does not dictate the result; the market produces it. This may appeal more to landowners than regulation.[171]

It is more difficult to determine whether a formalized private-law approach is better than an informal arrangement among landowners. One could argue that these regimes are only likely to exist (let alone thrive) in communities where a high level of informal control already exists. Even then, however, the effort at formalization has utility. First, formalization carries with it enforcement mechanisms that may be superior to those that exist with informal efforts.[172] Second, formalization requires the parties to think rigorously about the issues facing the group. The effort at formalizing the group's effort is thus formative and, hopefully, produces a workable framework within which the community can better achieve its goals. Finally, a formalized legal arrangement is probably more likely to garner governmental recognition and cooperation. That, in turn, may open up opportunities for better environmental outcomes than are possible through informal arrangements.

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170. *See, e.g.*, FREYFOGLE, *supra* note 5, at 91; Press Release, National Cattlemen's Beef Association, EPA Releases Clean Water Act Jurisdiction Guidance - NCBA Concerned with Administration's Vast Overreach (Apr. 28, 2011), http://www.beefusa.org/NEWSEPAReleasesCleanWaterActJurisdictionGuidance41450.aspx (discussing the private property rights of farmers and ranchers across the country).

171. This does not mean, however, that the governmental role is absent or insignificant. The legal regime within which an association operates is, after all, backed by the state. And this is not to say that a healthy dose of public-private interaction would not be necessary. As Ruhl and his co-authors argue, private parties may not be able to come together effectively on their own. RUHL, *supra* note 1, at 158-68.

172. *See* OSTROM, *supra* note 69, at 100-01 (noting the presence of both informal and formal mechanisms in long-enduring institutions).

III. POSSIBLE LEGAL REFORMS

One key benefit of a common-interest community approach is the ability to utilize existing legal tools. There is no need to wait for large-scale legislative reforms before embarking on a private-sector effort. However, the role of the state is not altogether irrelevant. As Ostrom has concluded in her seventh principle, the long-term success of collective-action institutions depends in part on the absence of external government resistance to the institution.[173] Under this principle, users must also have the ability to create long-term tenure rights in the resource.[174] These two observations are linked: the ability to create long-term tenure rights depends in part on the lack of governmental resistance or, in the best case, on government recognition and protection of those rights. Thus, one must examine the level of governmental support for these efforts even though government is not the primary actor. As is always the case, the line between public and private is somewhat fleeting.

Two concerns arise here: (1) the law of servitudes and (2) the history of wildlife regulation in the United States. I address these concerns and possible legal reforms for each below. Overall, however, the need for legal reform is far from clear. The United States has a long history of individual landownership that sanctifies owners' ability to exclude and to determine how their lands are used.[175] Thus, if we are simply talking about ordering land uses in the private sector, then government may not challenge the ability of ranchers to create long-term entitlements. But given the confluence of land use, wildlife, and servitude law, concerns exist.

The law of servitudes may need to be reformed to solidify landowners' ability to create long-term tenure rights.[176] Generally, the law of servitudes allows landowners to grant others access rights for a particular purpose (e.g., hunting or camping) and it enforces those rights and duties among subsequent owners of the real estate.[177]

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173. OSTROM, *supra* note 136, at 259.

174. *Id.*

175. FREYFOGLE, *supra* note 5, at 102.

176. Obviously, in states where servitude law may pose a problem, alternative arrangements like special districts or entity ownership should be considered.

177. The law of servitudes is a murky doctrinal area. As applied in this setting, there are actually various conveyances of interests in property that may or may not garner judicial enforcement. For a description of the law of servitudes and the

However, concerns arise when a landowner obligates himself and successive owners to pay funds to a common-interest association, maintain the property for wildlife habitat, or provide suitable habitat.

Historically, courts have refused to enforce some use restrictions and affirmative obligations on subsequent owners of the real estate.[178] These decisions vary in their doctrinal grounds and policy rationales, but many courts have been concerned about the threat such obligations pose to the value and alienability of land as well as to the free use of land by subsequent owners.[179] Modern courts have eroded the doctrines supporting these decisions because of the importance of servitudes to land development and the benefits they can be used to create, but judicial reluctance to enforce these sorts of obligations persist in some states.[180]

In states where this remains an issue, legislation could override the judicial rules. One example of a similar override is that concerning conservation easements—the foundation of the land-trust movement. Conservation easements faced a level of uncertainty under property law because of their perpetual duration and courts' characterization them as threatening the value, alienability, and productive use of lands.[181] They were also subject to judicial skepticism because they were typically held in gross, meaning that they were held by trusts or entities that owned no land to which the benefit of the easement could run..[182] To avoid these concerns, many states created enabling legislation, firmly establishing conservation easements as property law

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RESTATEMENT's position, *see* HYATT & FRENCH, *supra* note 93, at 14-17. For the RESTATEMENT's treatment of the right to remove game, see its description of "profits" in § 1.2. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 1.2 (2000).

178. For the common-law problems facing conservation-oriented servitudes, see Airey, *supra* note 158, at 752-56. Airey describes one aspect of these problems as a "negative easement" problem. I think the more likely problem arising with servitudes in this area is that of affirmative burden. One could, however, classify a restraint geared at wildlife production as either, depending upon whether or not one believes conservation is a productive land use.

179. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 3.1 cmt. k (2000) (describing historical blanket constraints on affirmative burdens), § 3.1 cmt. e (explaining historical approaches).

180. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 3.5 cmt. a (2000) (rejecting blanket constraints on affirmative burdens and rejecting the theory of indirect restraints on alienation).

181. Airey, *supra* note 158, at 753-56.

182. *Id.*

tools.[183] There are, however, conditions associated with their use, including a list of qualifying entities that can hold them, typically governmental entities and charitable organizations.[184]

The servitudes that I argue landowners could use to organize themselves and create a common-interest association do not raise an in-gross problem (to the extent it still exists in state common law), need not raise perpetuity concerns, and should be construed as involving land-use obligations that facilitate development by enhancing the value, alienability and productive capacity of the lands they affect. However, if I am wrong, then enabling legislation like that created for conservation easements could be crafted to deal with these problems. Significantly, such legislation could contain conditions identifying what policymakers view as good associations in this context.

The second problem is the history of governmental control over wildlife resources.[185] As with servitude law, the history of governmental wildlife control raises the prospect of challenge by external governmental authority and poses a risk to landowners' ability to create long-term tenure rights in wildlife.[186] Many states currently allocate wildlife through permit mechanisms or other sorts of hunting regulations.[187] In Nebraska, for example, the allocation of large game species like deer is made through a permitting system in which non-transferrable permits are sold to hunters or distributed to landowners. Geographic limits on permits are also a common feature of regulated hunting. For other types of game, like upland birds, hunting is restricted to a particular number of days and a limit is placed on the number and sex of the species that each individual hunter can take.[188] Regardless of the particular approach, game

183. *See id.* at 756; NEB. REV. STAT. §§ 76-2, 111-18 (2005).

184. Those conditions are currently under reexamination. *See* L.B. 529, 102nd Leg. (Neb. 2011) (limiting the duration of such easements to ten years and giving property taxing jurisdictions the authority to prohibit the creation of such easements).

185. For a description of this history, see Darren K. Cottriel, Comment, *The Right to Hunt in the Twenty-First Century: Can the Public Trust Doctrine Save an American Tradition?* 27 PAC. L.J. 1235, 1237-45, 1253-56 (1996).

186. OSTROM, *supra* note 136.

187. *See* Cottriel, *supra* note 185, at 1245 & n.58; 163 NEB. ADMIN. CODE Ch. 2 (2008).

188. For information on Nebraska's permitting regime, see NEBRASKA GAME & PARKS, http://outdoornebraska.ne.gov/hunting.asp.

utilization is highly regulated, with an underlying belief that game is public property to which individuals are given access on the government's terms.[189] Given this state of affairs, government may resist the sort of effort described here.

In some states this regime is changing, with governmental agencies recognizing that private landowners hold the key to better game management and hunting opportunities. For instance, in Colorado, landowners can get transferrable hunting permits that they can sell.[190] This provides them with a financial incentive to manage their lands for the presence of huntable species.

Further signals of a shift in policy can be found in the recently enacted Voluntary Public Access and Habitat Incentive Program,[191] administered by the Farm Service Agency within the United States Department of Agriculture.[192] A product of the 2008 Farm Bill, this program provides grant funding to state governments

> to encourage owners and operators of privately-held farm, ranch, and forest land to voluntarily make that land available for access by the public for wildlife-dependent recreation, including hunting, fishing, and other compatible recreation and to improve fish and wildlife habitat on their land, under programs administered by State or tribal governments.[193]

That grant money, in turn, compensates landowners for granting public access for nature-based recreation.[194]

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189. *See, e.g.*, Benson v. State, 710 N.W.2d 131, 160-61 (S.D. 2006); Stephen P. Halbrook, *The Constitutional Right to Hunt: New Recognition of an Old Liberty in Virginia*, 19 WM. & MARY BILL RTS. J. 197, 203 ("Today, hunting is a regulated sport which promotes wildlife conservation under the public trust doctrine.").

190. *Ranching for Wildlife*, COLO. DIV. OF WILDLIFE, http://wildlife.state.co.us/Hunting/BigGame/RanchingforWildlife (last visited Jun. 28, 2011).

191. 16 U.S.C. § 3839bb-5 (Supp IV 2010).

192. *See* Commodity Credit Corporation, *Voluntary Public Access and Habitat Incentive Program*, 75 Fed. Reg. 39,135 (Jul. 8, 2010).

193. *Id.*

194. News Release, Farm Serv. Agency, USDA, USDA Announces Voluntary Public Access and Habitat Incentive Program Grants (Oct. 4, 2010), *available at* http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=ner&newstype=newsrel&type=detail&item=nr_20101004_rel_0503.html (VPA-HIP funds may be used to provide rental payments and other incentives, such

Given the need for enhancing wildlife populations and biodiversity on privately owned lands, the system could be changed to further decrease the prospect of challenge by external governmental authorities. One option would be to eliminate all game regulation within common-interest communities like those described here. Arguably, things like permitting systems would not be necessary once landowners within the community have an incentive to manage game populations for their own benefit and are making allocation decisions necessary to sustain game populations. Indeed, we do not require a permit to slaughter a certain number of cattle. The same approach could be used here.

However, scrapping permit systems for game hunting would dramatically change American wildlife law. American law is replete with laws regulating hunting, including hunting on private property.[195] Game management can take a variety of forms, but landowners are seldom granted absolute discretion to hunt or allow others to hunt a particular species.[196] Perhaps the only examples of such an unregulated approach are those species that are regarded as pests or those that a landowner concludes are damaging his or her property.[197]

Indeed, it may not be good policy to eliminate the state's wildlife management role. For example, state-level data collection and management can be used to control external impacts for game that travel beyond the common-interest community's boundary, as well as ensure that non-participants do not harm the resource system. Moreover, as in the cattle industry, there may be public-health issues associated with wildlife management that necessitate state involvement.[198] Many states have also developed the knowledge and facilities necessary to make management decisions.

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as technical or conservation services to landowners who, in return, provide the public access to their land).

195. *See* Comment, *The Right to Hunt in the Twenty-First Century, supra* note 185 at 1237-45, 1253-56.

196. *See supra* notes 187-89 and accompanying text.

197. *See Hunting Licenses and Permits*, TEX. PARKS & WILDLIFE, http://www.tpwd. state.tx.us/publications/annual/general/hunt_licenses (last visited Jun. 28, 2011) (explaining that no hunting license is required to hunt attacking coyotes, depredating feral hogs, or depredating fur-bearing animals).

198. Brucella in elk and bison is an example of a (debatable) concern that has been regulated. *See* Holly Doremus, *Restoring Endangered Species: The Importance of Being Wild*, 23 HARV. ENVTL. L. REV. 1, 33-34, n.178 (1999);

Given the history and utility of state involvement, it may be more efficient to preserve the state's wildlife-management role. This could be done in a number of ways. Common-interest communities could be required to submit wildlife management plans to a state agency for its approval. The state could also continue to allocate use rights through a permitting system. It would determine the overall numbers of species that can be harvested within the common-interest community's boundaries and the association could then further allocate the resource among its members. In conjunction with such an allocation, a limited number of transferrable permits could be issued to the association or to the landowners within the association. The transferrable permit could then be sold in conjunction with the association's or landowner's operation. State allocations to associations, perhaps in conjunction with a set of standards the association would need to meet to qualify for the issuance, would also provide a strong incentive to form these groups.

State involvement would also acknowledge government support and allay participant concerns about governmental challenges.[199] Such a governmental commitment would also stabilize the association's long-term tenure rights in the resources and lessen the threat of governmental interference with their operations. Thus, providing a role for public wildlife agencies in the development of these institutions may benefit landowners, as well as the public.

Finally, changes to our agricultural and conservation policy could facilitate the emergence of these businesses. The "if it pays, it stays" hypothesis offered above is clearly far too simple to support the widespread emergence of nature-based businesses. More difficult questions will arise concerning the level of return and production costs. As I have mentioned, scale efficiencies may emerge with collaboration. And with a high enough level of return, production costs may be low enough to generate profits. But they may not. And

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Robert B. Keiter & Peter H. Froelicher, *Bison, Brucellosis, and Law in Greater Yellowstone Ecosystem*, 28 LAND & WATER L. REV. 1, 22-26 (1993).

In this context, the additional prospect of landowners focusing on certain species and species' traits provides a further level of concern if biodiversity conservation is a policy goal. There is no assurance that consumers will demand good biodiversity. And this is one way of alleviating that concern.

199. The political support of public wildlife managers has been an important ingredient in the emergence of these institutions in countries like Namibia. Odendaal & Shaw, *supra* note 3, at 31-32.

the problem of transformation costs looms large in cooperative institutional efforts.[200]

There are, however, ways of dealing with these problems if they emerge. Indeed, we have a long history of providing cost-share assistance to agricultural producers for practices that generate insufficient income to justify the investment.[201] Making up that shortfall is similar to making up income shortfalls in this area, and programs can be created to do it.[202] A similar existing program is the Wildlife Habitat Incentive Program (WHIP), which provides cost-share and technical assistance "for the development of wildlife habitat on private agricultural land, nonindustrial private forest land, and tribal land."[203] Programs like this could be expanded and funded at higher levels as income-assistance measures.

Public programs like this might be more appealing from a fiscal perspective if producers did not need on-going income support, but rather needed only "seed money" to establish practices and facilities that will generate sufficient on-farm returns over the longer term. If that were the case, then replacing the old Conservation Title programs[204] that fund ongoing shortfalls with seed-money programs would be fiscally appealing. And even if seed-money programs were not possible, adjusting the Conservation Title programs to facilitate nature-based entrepreneurship could reduce the level of income support producers need,, driving down the costs of the program or expanding the program's reach.

Some emerging programs in addition to the WHIP are starting to provide support for nature-based entrepreneurship. The newly created Cooperative Conservation Partnerships Initiative,[205] administered by

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200. OSTROM, *supra* note 69, at 198-202.

201. *See, e.g.*, Environmental Quality Incentives Program, 16 U.S.C. §§ 3839aa-3839aa-9 (Supp. IV 2010).

202. Whether we would want to do it as a matter of policy is a difficult question. Such payments perhaps should not support practices for which the costs outweigh the benefits. However, to say that costs outweigh benefits for an individual producer may mean simply that a portion of the benefits inure to the public. If that is the case, then the public ought to pay.

203. Wildlife Habitat Incentives Program, 16 U.S.C. § 3839bb-1(a) (Supp. IV 2010).

204. Conservation Title programs are those that are created in the Conservation Title of the Farm Bill. *See, e.g.*, Title II: Conservation, Farm Security and Rural Investment Act of 2002, Pub. L. No. 107-171, 116 Stat. 134 (2002).

205. 16 U.S.C. § 3843 (Supp. IV 2010).

the Natural Resources Conservation Service ("NRCS") within the United States Department of Agriculture ("USDA"), is an example of federal funding that may work well in this area.[206] The program, created by the 2008 Farm Bill, allows for the NRCS to partner with "producer associations"[207] to deliver program funds to individual producers for conservation practices and improvements.[208] A common-interest community like that described here may qualify as a producer association and may be eligible to partner with the NRCS to support federal funding for producers' efforts.

The development of information and technologies is another feat the public has undertaken through USDA's vast reach and, quite significantly, through the land grant complex of universities scattered throughout the United States. The sciences of grassland management, wildlife biology, and ecology could be placed on par with the crop sciences and agronomy. Indeed, if conservation is as significant as agricultural production, a concerted effort at supporting the development of this sector of the economy seems entirely justifiable.[209]

CONCLUSION

The need for nature-based entrepreneurship is no less important to the local-food movement than it is to our current agricultural system. Nature-based entrepreneurship can serve as a diversification strategy

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206. NATURAL RES. CONSERVATION SERV., USDA, *Cooperative Conservation Partnership Initiative,* http://www.nrcs.usda.gov/programs/ccpi (last visited Jun. 28, 2011).

207. 16 U.S.C. § 3843(d) (Supp. IV 2010).

208. Commodity Credit Corporation, *Cooperative Conservation Partnership Initiative*, 75 Fed. Reg. 18,472 (Apr. 12, 2010).

209. Indeed there are some who regard the land grant system as a complete failure.

> [I]n general, it can no longer be denied that the system as a whole has failed. One hundred and twenty-four years after the Morill Act, ninety-nine years after the Hatch Act, seventy-two years after the Smith-Lever Act, the 'industrial classes' are not liberally educated, agriculture and rural life are not sound or prosperous or permanent, and there is no equitable balance between agriculture and other segments of the economy. Anybody's statistics on the reduction of the farm population, on the decay of rural communities, on soil erosion, soil and water pollution, water shortages, and farm bankruptcies tell indisputably a story of failure.

BERRY, *supra* note 17, at 40.

for local-food producers and, if new lands are enlisted in the effort, it will help to avoid the loss of some ecological services to food production. Moreover, the communitarian thinking that may emerge within foodsheds may foster the emergence of these enterprises.

As these enterprises emerge, lawyers should be ready with solutions to meet these clients' needs. The common-interest community may be a good way of establishing collective nature-based entrepreneurial efforts in areas where and fragmentation inhibits resource development and use. These communities can provide participants with the benefits of geographically larger operations without purchasing additional land. Such communities can provide members with a governance mechanism for making provisioning and allocation decisions in an adaptive context, a revenue device for spreading the costs of management practices or improvements among the participants, and the opportunity to generate income from utilizing jointly created resources.

Participants will face many challenges in designing such an institution, but these challenges are not insurmountable for motivated producers who see value in providing nature-based opportunities to consumers. If successful, their lands may become more multi-functional and more profitable,[210] providing not only food, but also providing a broad array of other products and experiences to consumers.

210. Claims of profitability legitimately may be met with skepticism when existing enterprises cannot be found.. However, these enterprises are quite common in certain parts of the world and examples can be found in the United States. In future work, I intend to use these enterprises to inform the claims I have made here.