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Ownership Concentration: Lessons from Natural Resources

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OWNERSHIP CONCENTRATION: LESSONS FROM NATURAL RESOURCES

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ABSTRACT—Concentration of ownership over land or other resources is both a sign and a cause of inequality. Concentration of ownership makes access to such resources difficult for those less powerful, and it can have negative effects on local communities that benefit from a more distributed ownership pattern. Such concentration goes against the antimonopoly principles behind the homesteading land policies and the legal regimes that regulate many natural resources. This Essay suggests that where concentration is a concern, one might draw lessons for reform by looking to the field of natural resources law, which employs a range of deconcentration mechanisms affecting fisheries, mineral extraction, farmland, and the like that have proven a considerable success. These deconcentration mechanisms have taken mostly two forms: restrictions on how much one rights holder can hold and restrictions on who can hold rights. These deconcentrating measures are more likely to be adopted in resources with a defined, relatively small market, with homogeneous uses and users, and where community externalities from concentration are assessable.

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INTRODUCTION

Oracle CEO Larry Ellison evidently enjoyed a vacation to the Hawaiian Island of Lanai to such an extent that it prompted him to acquire title to most of the island. For the bargain price of $300 million, Ellison now held the keys to convert the Lanai landscape—on which 3,200 people lived year-round—into his personal version of a health and sustainability utopia.[1]

Ellison's holding is but one illustration of the extensive concentration of ownership that plagues our real property regime nationwide. The 100 largest private landowners in the United States own an area equivalent to New England sans Vermont.[2] Bill and Melinda Gates entered this list in 2020, making it to the forty-ninth position with their total 242,000 acres.[3] They entered by buying 14,500 acres in east Washington's fertile Columbia River Basin called 100 Circles.[4] The tab: $12,000 per acre.[5] The seller was

[1] Avery Hartmans, *Oracle Billionaire Larry Ellison Now Lives on Lana'i, the Hawaiian Island He Mostly Owns. Here's How He's Working to Turn the Island into a Wellness Utopia and '100% Green Community.,'* INSIDER (Dec. 29, 2021, 10:37 AM), https://www.businessinsider.com/oracle-larry-ellison-lanai-hawaii-plans-sustainability-tourism-2020-12 [https://perma.cc/LR29-DXNB]; Jon Moallen, *Larry Ellison Bought an Island in Hawaii. Now What?*, N.Y. TIMES, (Sept. 23, 2014), https://www.nytimes.com/2014/09/28/magazine/larry-ellison-island-hawaii.html [https://perma.cc/CQK4-J6FN]. The population of the island has dropped since the 2020 census. *See Lanai City, Hawaii Population 2022*, WORLD POPULATION REV., https://worldpopulationreview.com/us-cities/lanai-city-hi-population [https://perma.cc/22HP-LGJG].

[2] *The Biggest U.S. Landowners Own Nearly as Many Acres as New England States*, FERN (Jan. 1, 2018), https://thefern.org/ag_insider/biggest-u-s-landowners-nearly-many-acres-new-england-states/ [https://perma.cc/FA8C-FXSA]; Jeff Etheredge, Lisa Martin, & Katy Richardson, *The Land Report 100*, LAND REP., Winter 2020, at 123, https://landreport.com/americas-100-largest-landowners/ [https://perma.cc/3PNJ-B9S5].

[3] Etheredge et al., *supra* note 2, at 148.

[4] Eric O'Keefe, *Bill Gates Is About to Change the Way America Farms*, LAND REP., Winter 2020, at 54, 56, https://editions.mydigitalpublication.com/publication/?i=688913 [https://perma.cc/6RS2-EGY3].

[5] *Id.*

John Hancock Life Insurance Co. a multi-billion dollar asset management company with key holdings in major markets in the United States, Canada, and Australia.[6] In 2021, another billionaire, the richest person on Earth, Jeff Bezos, also made it to the list in the twenty-fourth position by amassing 420,000 acres.[7] The top ten of this list of 100 largest landowners has not changed much for over a decade.[8] The Emmerson family, now number one, owns almost 2.5 million acres and have been involved in single acquisitions of up to half a million acres, but several other landowners have landholdings of over two million acres.[9]

Only sovereign wealth funds, institutional investors, and extremely powerful individuals can cut those checks. This concentration of ownership is reminiscent of feudal times, and it certainly illustrates the disparities in wealth and income present today in the United States.[10] The control by one or few powerful actors makes us uncomfortable and rightly so. Ownership concentration makes it harder for others to access landownership. In addition, it is harder for state and local governments to regulate this private power, which often dwarfs theirs. The State of Colorado is currently struggling with its response to large out-of-state financial companies investing in water rights and becoming the main water rights holder in many areas.[11] Wall Street is investing in water directly or investing in farms with water rights.[12] Furthermore, landownership concentration, particularly if coupled with an absentee landowner, has effects beyond the parties to the

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[6] *Id.* at 57.

[7] Cary Estes, Jeff Etheridge, & Lisa Martin, *The Land Report 100*, LAND REP., Winter 2021, at 110, 142, https://editions.mydigitalpublication.com/publication/?m=61105&i=733821&p=112&ver=html5 [https://perma.cc/3YAU-6NZX].

[8] *Compare The Land Report 100*, LAND REP., Fall 2012, at 62, 64–68, https://editions.mydigitalpublication.com/publication/?m=61105&i=612201&p=66&ver=html5 [https://perma.cc/9BJP-3J8G], *with* Estes et al., *supra* note 7, at 112–20 (noting that nine of the ten families remained the same in these two lists).

[9] Estes et al., *supra* note 7, at 112–24 (noting that the list includes John Malone, the Reed Family, and Ted Turner).

[10] *See* Joseph William Singer, *Property as the Law of Democracy*, 63 DUKE L.J. 1287, 1309–10 (2014).

[11] Ben Ryder Howe, *Wall Street Eyes Billions in the Colorado's Water*, N.Y. TIMES (Jan. 3, 2021), https://www.nytimes.com/2021/01/03/business/colorado-river-water-rights.html [https://perma.cc/BS74-962R].

[12] This is actually the approach that Michael Burry, masterfully depicted in *The Big Short*, has taken. He is buying fertile farmland. Dillon Jacobs, *How to Invest in Water Like Dr. Michael Burry from the Big Short*, FINMASTERS (Mar. 11, 2022), https://finmasters.com/michael-burry-invest-in-water/ [https://perma.cc/9JWQ-Z3LJ]. While we do not know the motives of the Gateses, *see supra* note 3 and accompanying text, their aim could be similar.

transaction: local communities may lose control over their present and their future.[13]

There have been few robust moves in the property system to directly counter the issue of land concentration. There are but a few select regulatory examples to the contrary, such as the reform at issue in the famous takings case of *Hawaii Housing Authority v. Midkiff* three decades prior to Ellison's acquisition.[14] This Essay suggests that where concentration is a concern, one might draw lessons for law reform by looking to the field of natural resources law, which employs a range of deconcentration mechanisms affecting fisheries, mineral extraction, farmland, and the like that have proven a considerable success. The existence of these measures suggests strong antimonopoly and distributive justice principles underlying our natural resources regulations.[15] These deconcentration mechanisms have taken mostly two forms: restrictions on how much one rights holder can hold and restrictions on who can hold rights. For example, in the Alaskan fisheries' quota system, there are limits both on the total amount of catch someone can hold and on the size of business that can hold them.[16]

Given the increasing scarcity of some of our natural resources due to climate change and the also growing concentration of wealth, considering measures like the definition of tiered property rights in the Alaskan fisheries' quota system or the limits on mineral leases on public lands is growing increasingly relevant. But such transplants are not always straightforward.[17] In this regard, when borrowing these deconcentration measures, there are three related factors that regulators need to consider: the scope of the market, the homogeneity of resource users and their kinds of uses, and the pervasiveness of community externalities. Preexisting rights will also influence the decision of which measures to adopt.

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[13] *See infra* Section II.E for a description of deep-pocket investment in different states.

[14] 467 U.S. 229 (1984). With the Land Reform Act, Hawaii aimed to solve concentration of ownership by exercising eminent domain and allowing those who were renting from some of the large landowners to acquire the property with financial help from the government. The mechanism worked as follows: any lessee living on a single-family residential lot of two acres or less could apply to the state for purchase of their lot if it was part of a development tract of at least five acres and if the lessee did not own residential property nearby. If twenty-five lessees or half the lots in a tract (whichever was less) filed similar applications, the state would determine if the sale satisfied a public purpose. If that was the case, the state would force the sale of the land or reach a voluntary agreement and resell it to the tenants. *See id.* at 233–34; HAW. REV. STAT. §§ 516-1, 516-22.

[15] Michael C. Blumm & Kara Tebeau, *Antimonopoly in American Public Land Law*, 28 GEO. ENV'T L. REV. 155, 157 (2016); David Schorr, *Appropriation as Agrarianism: Distributive Justice in the Creation of Property Rights*, 32 ECOLOGY L.Q. 3, 7 (2005).

[16] *Infra* Section II.C.

[17] *See generally* Vanessa Casado Pérez & Yael Lifshitz, *Natural Transplants*, 97 N.Y.U. L. REV. 933 (2022) (analyzing the reasons for and challenges of transplanting legal doctrines across subject areas, particularly as they relate to natural resources law).

Part I describes the potential costs arising from concentration of control over a resource. Part II reviews different natural resource regimes—from land to water—where ownership has been limited, the mechanisms employed to set those limits, and the reasons for those limits. Section II.A, *Homesteading*, describes the antimonopoly principles that are deeply embedded in our public land policies. Section II.B, *Minerals on Federal Lands*, shows how limits on concentration ensure governments are not dwarfed by those controlling natural resources. Section II.C, *Fisheries*, illustrates not only distributive aims in the design of property rights, but concerns beyond rights holders. In fisheries, distributive policies protect both small businesses and the communities that depend on them. In Section II.D, an unsuccessful example is covered: *Farmland*. Farmland policies, particularly in Iowa, have been described as anti-corporate because they limit the ownership of land to family corporations. The limits in Iowa have not been successful in preventing de facto concentration. Finally, Section II.E, *Water Rights*, captures a new wave of concentration: Wall Street firms investing in resources made scarcer by climate change. Part III analyzes which factors make deconcentrating reforms like those explored in Part II likely.

I. THE RISKS OF CONCENTRATION

Concentration of ownership of a resource can have negative consequences when such concentration translates, as it often does, into power and control imbalances. This Part starts by reviewing the moral grounds of why concentration is wrong, mostly based on the ideas of distributive justice and social participation. The example of Hawaii's land reform illustrates the above points. Second, building on the distributive justice component, this Part then expands on the inequality effects of concentration by reviewing how the tragedy of the groundwater commons in rural Arizona disproportionately affected those with fewer resources. Third, this Part will cover the risks of concentration beyond users themselves, looking at effects on communities, the environment, and local governments through the examples of the 2016 Scottish land reform and Colorado's path to curb water speculation.

Ethically, accumulating more than you need or having too much is suspect.[18] John Locke maintained that an individual could own as much property as "any one can make use of to any advantage of life before it spoils, so much he may by his Labour fix a property in: whatever is beyond this, is

[18] Patricia Farnese, *An Ethic of Enough: Ownership as an Ethical Choice*, 4 J.L. PROP. & SOC'Y 81, 85 (2019). This has dimensions both between individuals and between people and the environment.

more than his share, and belongs to others."[19] Similarly, when the Supreme Court of Illinois in 1898 discussed the ownership of the town of Pullman by Pullman's Palace-Car Company, the court stated that such concentration was "incompatible with the theory and spirit of our institutions" and interpreted state law as requiring the company to sell part of the land.[20]

One of the leading progressive property scholars in the country, Professor Joseph Singer of Harvard Law School, reviewing *Pullman's Palace-Car Co.* and other cases, discusses how while large owners help minimize information costs in the market, they create uncertainty and make access difficult for anyone else who wants to buy a piece of land.[21] This creates inequality, which harms the economy and leaves more people with unsatisfied preferences, eroding our ideal of democracy and moving us closer to a feudal system in which we are divided between owners and tenants.[22]

Concentration of ownership often goes hand in hand with absentee ownership.[23] This often implies that those who do not own property will be tenants. Tenancy was not the preference in the United States or in modern democracies.[24] Tenancy was conceived at best as a step towards ownership. Becoming an owner, rightly or not, was the goal. Ownership creates security, wealth, and particularly for the purposes of this Essay, stewardship. Tenants have incentives to think short-term and, thus, they often choose not to invest in the land or other resources sustainably.

The ownership and operation of farmland provides a useful example of the intersection of landownership and sustainability. Farmland does not need to be operated by the owner, but land tenure is key for a sustainable system. As former farmer Neil Hamilton put it: "Land ownership provides the stability, the autonomy, the opportunity for long-term planning and investment, and the wealth creation potential that is central to our agricultural

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[19] JOHN LOCKE, SECOND TREATISE OF GOVERNMENT § 31 (C.B. McPherson ed., 1980) (1690).

[20] People *ex. rel.* Moloney v. Pullman's Palace-Car Co., 51 N.E. 664, 674 (Ill. 1898).

[21] Singer, *supra* note 10, at 1310.

[22] *Id.* at 1312.

[23] JAYNE GLASS, ROB MCMORRAN & STEVEN THOMSON, THE EFFECTS ASSOCIATED WITH CONCENTRATED AND LARGE-SCALE LAND OWNERSHIP IN SCOTLAND § 2.4.3, at 16 (2019), https://www.landcommission.gov.scot/downloads/5dd7d807b8768_Research-Review-Concentrated-ownership-final-20190320.pdf [https://perma.cc/65PN-HFQ5] (correlating the increasing number of large, privately owned sporting estates with nonresident ownership in Scotland).

[24] Hous. Fin. & Dev. Corp. v. Castle, 898 P.2d 576, 593–94 (Haw. 1995) ("Owning property, especially real property on which one lives, together with all of its legal and equitable rights, is an American dream.") (quoting S. 4-19, at 799–802 (Haw. 1967)); Peter Dreier, *The Status of Tenants in the United States*, 30 SOC. PROBS. 179, 179 (1982).

history. Farmers who own their land have more security and autonomy."[25] But while providing for broad landownership was a goal of the early U.S. republic, widespread *distribution* of land was also key to advancing democracy and equality of political power.[26] In fact, United States public land and natural resource policies have always been based on an antimonopoly principle, favoring settlers over speculators.[27]

The Hawaiian Land Reform Act, which was deemed constitutional in *Hawaii Housing Authority v. Midkiff*,[28] perfectly captures this preference for ownership versus tenancy and the social goals that a less concentrated system should achieve. Decades before Larry Ellison purchased the island of Lanai, the Hawaiian legislature decided to put an end to the quasi-feudal land concentration existing in Hawaii, where many of those using the land were tenants at best. The Land Reform Act of 1967 allowed the Hawaiian government to condemn large landholdings to then redistribute them to those occupying the land in fee simple.[29] This would allow the land to be transferred without the tax consequences of private land sales.[30]

As the initial version of the Act put it, the goal of the statute was "the promotion of the public welfare and the securing of liberty as enunciated in the Constitution of the United States through the attainment of fee simple ownership of residential lots by the greatest number of people."[31] The condemnation was at the request of tenants who had to put forward the funds for the condemnation and had a bona fide intent to live in the development tract or in Hawaii,[32] clearly prioritizing residential uses and nonabsentee owners. Furthermore, each person could only acquire one tract.[33]

The legislature expected that the Act would bring "happiness," "general welfare," full enjoyment, and "security" to the lessees,[34] compared to

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[25] Sally Worley, *Who Owns the Farmland?*, PRAC. FARMERS OF IOWA (Nov. 6, 2018), https://practicalfarmers.org/2018/11/who-owns-the-farmland/ [https://perma.cc/K32A-VTAW] (quoting Neil Hamilton, *Adams County Needs Young Farmers*, *in* THE FUTURE OF FAMILY FARMS: PRACTICAL FARMERS' LEGACY LETTER PROJECT 82 (2016)).

[26] Blumm & Tebeau, *supra* note 15, at 160.

[27] *Id.* at 157, 173–74.

[28] 467 U.S. 229, 231–32 (1984).

[29] HAW. REV. STAT. § 516-83(a).

[30] *Midkiff*, 467 U.S. at 233.

[31] 1967 Haw. Sess. Laws 488 § 1(a).

[32] Brief of Amicus Curiae Pacific Legal Foundation in Support of Appellees at 5, *Midkiff*, 467 U.S. 229 (No. 83-141).

[33] Land Reform Act of 1967, S.B. 1128 § 17 at 496.

[34] HAW. REV. STAT. §§ 516-83(a)(5), (a)(8).

ownership concentration and inflation of real estate market prices,[35] which was a menace to public tranquility and welfare.[36] While the Act was not aimed at solving the "landless" status of many Native Hawaiians, it was expected to ameliorate it after many decades of unfulfilled promises. Before passing the Land Reform Act, the Native Hawaiians in their amicus brief gave the following data:

> [T]he state government owns a little under 39% of the total land area in the state, the federal government owns a little less than 10%, and only 72 private landowners, owning tracts of 1,000 acres or more, own 47%. This leaves less than 5% of the land in Hawaii available for a population of approximately one million. . . . The 18 largest landholders, with tracts of 21,000 acres or more, own more than 40% of the state's land area.[37]

The Bishop Estate, whose trustees challenged the constitutionality of the Act leading to the famous Supreme Court case, owned 9% of all the land of the state.[38] The Pacific Legal Foundation, in its amicus brief supporting the landowners, attacked the Land Reform Act because its justification of too much land in too few hands was not unique to Hawaii, but common in this country.[39] In fact, the Foundation gave data from 1978 about the pattern of landownership in the continental United States, stating that "[l]ess than 0.5 percent of the largest owners hold 40 percent of the land, while 78 percent of the smallest owners hold about 3 percent of the land."[40] The Supreme Court considered the Act a rational way to deal with a problem—land oligopoly—affecting public interest.[41]

Part of the preference for ownership over tenancy has to do with inequality. Concentration of control over natural resources can increase the cost of those resources not only for other users, but also for end consumers.[42]

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[35] The Office of Hawaiian Affairs, on the contrary, felt that the fee simple ownership of lands by individual lessees, as the Land Reform Act authorized, would cause the inflation in price of the land due to the investment any one lessee would have in their land. Brief of Amicus Curiae the Office of Hawaiian Affairs in Support of Appellees at 28, *Midkiff*, 467 U.S. 229 (No. 83-141).

[36] *Midkiff*, 467 U.S. at 232.

[37] Brief of Amici Curiae The Hou Hawaiians & Maui Loa, Chief of the Hou Hawaiians at 32–33, *Midkiff*, 467 U.S. 229 (No. 83-141).

[38] *Id.* at 33.

[39] Brief of Amicus Curiae Pacific Legal Foundation in Support of Appellees at 10, *Midkiff*, 467 U.S. 229 (No. 83-141).

[40] *Id.* (quoting JAMES A. LEWIS, U.S. DEP'T OF AGRIC., AGRIC. INFO. BULL. NO. 435, LANDOWNERSHIP IN THE UNITED STATES, 1978 ii (1980)), https://naldc.nal.usda.gov/download/CAT87210033/PDF [https://perma.cc/8WND-Q5PV]).

[41] *Midkiff*, 467 U.S. at 241–42.

[42] SB 20-048 WORK GRP., REPORT OF THE WORK GROUP TO EXPLORE WAYS TO STRENGTHEN CURRENT WATER ANTI-SPECULATION LAW § 4.b, at 34 (2021), https://drive.google.com/file/d/1e3AgL3Ycvey3_qiObUWLX8r2RSakmhRk/view [https://perma.cc/B6NE-8TTM].

The effect of concentration in inequality is perfectly captured by groundwater overexploitation in some areas in Arizona.

Groundwater extraction is not subject to regulation everywhere. This is the case in rural Arizona. In Sulphur Springs Valley, residential wells ran dry while large farms kept flourishing.[43] The residential wells impacted were in low-income populations who often live in mobile homes. The area relies on groundwater aquifers, and the aquifer water table kept getting lower and lower as water pumping increased. Users pumped beyond what is considered the safe yield, or the amount that allows the aquifer to recharge.[44] The only method for users to keep using water is to drill more, deeper wells.

Drilling a deeper well can cost between $15,000 and $30,000, as much as half of the value of many homes in Sulfur Springs Valley.[45] So while farms continued to irrigate, residential owners had sand in their faucets and could not take regular showers. Some of the farms were long-standing family farms whose owners had opposed groundwater regulation. But recently, the lack of regulation has attracted large, corporate farms, including Middle Eastern farmers who, after running out of water in their places of origin, have adapted easily to Arizona, where they grow alfalfa to export to Saudi Arabia.[46] For example, the Saudi Almarai Corporation bought 10,000 acres in the town of Vicksburg, near Sulphur Springs Valley, and Al Dahra, from the United Arab Emirates, bought several thousand-acre farms near Arizona's border with California.[47]

Before these large corporations arrived, farmers were mining groundwater in steadily increasing amounts. But it has been the exponential growth of this practice that has made the negative long-term consequences obvious. Furthermore, these affluent corporate farms could drill deeper wells, which are cost prohibitive for small farmers, and plant nut trees, which demand constant irrigation. One farming conglomerate drilled or bought 293 wells, some pumping more than 2,000 gallons per minute.[48]

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[43] The *New York Times* recounted the story of the Paups, who moved to a mobile home in the area, investing all their savings, only to run out of water one year later. They were then forced to find a new place of abode after months and months of rationing water by not showering and not flushing toilets, among other things. Noah Gallagher Shannon, *The Water Wars of Arizona*, N.Y. TIMES (July 19, 2018), https://www.nytimes.com/2018/07/19/magazine/the-water-wars-of-arizona.html [https://perma.cc/E7NL-9V9D].

[44] *Id.*

[45] *Id.*

[46] *Id.*; *Saudi Hay Farm in Arizona Tests State's Supply of Groundwater*, NPR (Nov. 2, 2015, 5:07 AM), https://www.npr.org/sections/thesalt/2015/11/02/453885642/saudi-hay-farm-in-arizona-tests-states-supply-of-groundwater?t=1654614388663 [https://perma.cc/22BW-EQMB].

[47] Shannon, *supra* note 43.

[48] *Id.* In contrast, the above-mentioned Paups needed half a day to eke out five gallons. *Id.*

Even with this situation where both the social—the lack of available supply for residents—and environmental impacts called for a regulatory solution limiting the use of groundwater, the Arizona legislature did not pass a bill. It is important to note that limiting either water or land concentration here could have effects on the use of the other resource, ensuring a more equal distribution as this case suggests.

Two additional examples further illustrate the community drawbacks of resource ownership concentration: the 2016 Scottish land reform and Colorado's path to curb water speculation. Scotland recently reformed its property laws by passing the Land Reform Act of 2016.[49] Both the reforms and the preparatory works leading to them illuminate the discussion of the effects of concentration. Community Land Scotland, a group of community landowners, facilitated an academic and policy discussion about the problems landownership in Scotland was facing.[50] Mike Danson, an economics professor at Heriot-Watt University, said that "[w]hen there are monopoly powers over the land and its resources, the local community and natural environment are threatened with negative externalities, capacity to flourish is restricted and enforced outward migration is encouraged."[51] Additionally, "[w]hen private property rights are permitted to dominate wider social and environmental needs, sustainability and inclusion, broadly defined, are constrained."[52]

Two issues were of concern in the enactment of the Scottish Land Reform Act. First was the potential investment by foreign corporations and the lack of traceability and accountability to the community for those actors.[53] Much of the foreign-owned property in Scotland was owned by companies located in tax havens.[54] To solve this issue, the Land Reform

[49] Land Reform (Scotland) Act 2016, (ASP 18), https://www.legislation.gov.uk/asp/2016/18/contents/enacted [https://perma.cc/3EY7-9FUF].

[50] MIKE DANSON, SCOPING THE CLASSIC EFFECTS OF MONOPOLIES WITHIN CONCENTRATED PATTERNS OF RURAL LAND OWNERSHIP 1 (2020), https://www.communitylandscotland.org.uk/wp-content/uploads/2020/12/Scoping-the-classic-effects-of-monopolies-within-patterns-of-rural-land-ownership-a-discussion-paper-1.pdf [https://perma.cc/G2CV-L5DD].

[51] *Id.* at 38.

[52] *Id.*

[53] LAND REFORM REV. GRP., THE LAND OF SCOTLAND AND THE COMMON GOOD § 5, at 35 (2014), https://www.gov.scot/binaries/content/documents/govscot/publications/progress-report/2014/05/land-reform-review-group-final-report-land-scotland-common-good/documents/00451087-pdf/00451087-pdf/govscot%3Adocument/00451087.pdf [https://perma.cc/5MZ8-9R9A].

[54] Joe Lo, *Revealed: The Billions in Scots Property Owned by Offshore Accounts*, NATIONAL (June 21, 2020), https://www.thenational.scot/news/18531316.revealed-billions-scots-property-owned-offshore-accounts/ [https://perma.cc/J65G-JY56].

Review Group proposed not to allow entities without a European domicile to own land in Scotland.[55]

Second, there were concerns about ownership concentration, particularly in rural property. At the time of the report that spurred the Land Reform Act, 432 private landowners owned half of the private land in rural Scotland—that is, half of this key resource was owned by 0.008% of the population.[56] The report raised questions about the significance of this measure of inequality in a democracy. In fact, Scotland is sometimes described as having the most concentrated pattern of ownership in the world.[57] This concentration is in part tied to being the last country to abolish feudal tenure with the Abolition of Feudal Tenure Act of 2000.[58] Concentration was reduced by purchases by public entities and by the growth of owner-occupied farms.[59] But the subsequent trend seemed to be one of reconcentration. Accordingly, the review group, arguing that "[l]and is a finite, national resource," proposed to limit the amount of land someone could own.[60]

The review group proposed a limit because ownership is the key determinant of how land is used.[61] The concentration of private ownership in rural property, as the Scotland case shows, can often stifle entrepreneurial ambition, local aspirations, and the ability to address an identified community need. The concentrated ownership of private land in rural communities places considerable power in the hands of relatively few individuals, which can in turn have a huge impact on the lives of local people[62] and jars with the idea of a modern democracy. Property law shapes our social relationships. In a democracy, where we all ought to be free and

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[55] LAND REFORM REV. GRP., *supra* note 53, § 5.11, at 36.

[56] *Id.* § 24.2, at 159.

[57] Kevin McKenna, *Scotland Has the Most Inequitable Land Ownership in the West. Why?*, GUARDIAN (Aug. 10, 2013, 4:00 PM), theguardian.com/uk-news/2013/aug/10/scotland-land-rights [https://perma.cc/9KYA-PMEY] (quoting Jim Hunter, a former Land Reform Review Group member, to this effect).

[58] LAND REFORM REV. GRP., *supra* note 53, § 24.3, at 160.

[59] *Id.* § 24.5, at 160.

[60] *Id.* § 24.19, at 165.

[61] *See* SHONA GLENN, JAMES MACKESSACK-LEITCH, KATHERINE POLLARD, JAYNE GLASS & ROB MCMORRAN, INVESTIGATION INTO THE ISSUES ASSOCIATED WITH LARGE SCALE AND CONCENTRATED LANDOWNERSHIP IN SCOTLAND § 9.1, at 56–57 (2019), https://www.landcommission.gov.scot/downloads/5dd7d6fd9128e_Investigation-Issues-Large-Scale-and-Concentrated-Landownership-20190320.pdf [https://perma.cc/6M6Y-G36J].

[62] *Id.* § 5.1, at 22 (describing the imbalance of power in negotiations between locals and large landlords).

equal, if property law favors or allows for concentration of ownership, freedom and equality are eroded.[63]

Furthermore, the study authorized by the land commission states that while private capital may be a driver of rural development, private capital does not necessarily need to be coupled with large landholdings.[64] Alternative sources of private capital could invest in rural areas without being the landowners. Relatedly, the evidence of huge economies of scale in agriculture is weak, and where such evidence exists, these economies of scale benefit landowners more than the population at large.[65] In the Scottish report, economies of scale are questioned because there is no evidence that smaller holdings could not accomplish similar results and because the benefits may not be attributable to size but to the policies and the fiscal environment giving preferential treatment to larger holdings at the time.[66] In addition, the report points out that large landholdings are neither sufficient nor necessary to environmental protection.[67] Large landholdings create imbalances of power between the landlord and the locals, and the latter may be reluctant to oppose the large landowner.[68]

However, despite the critiques to landownership concentration, there have not been many reforms that tackle the problems derived from it in Scotland. The most recent reforms, beyond the right to roam,[69] have tackled concentration indirectly by regulating and expanding the right of communities to buy private land,[70] even for environmental sustainability reasons.[71] Thus, Scotland has tackled the problem of ownership concentration indirectly, empowering local communities to acquire land from those large landholdings. But the land reform in Scotland has been a long process, and perhaps it is not yet completed.

The problem of ownership concentration is not exclusive to land. Water is currently experiencing such an issue. It is often said that "water is the new

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[63] *See* Singer, *supra* note 10, at 1308–13 (using Ellison's Lanai purchase and King William's takeover of England as examples of concentrated landownership stripping people of their autonomy).

[64] Glenn et al., *supra* note 61, § 4.4, at 20.

[65] *Id.*

[66] *Id.* at 54.

[67] *Id.* at 36.

[68] *Id.* at 22, 27.

[69] Land Reform (Scotland) Act 2003, (ASP 2), pt. 1, ch. 1, § 1, https://www.legislation.gov.uk/asp/2003/2/section/1 [https://perma.cc/DQ5M-NYJH].

[70] *Id.* pt. 2, ch. 1, https://www.legislation.gov.uk/asp/2003/2/part/1/chapter/1 [https://perma.cc/8S2P-5XDQ].

[71] Land Reform (Scotland) Act 2016, (ASP 18), pt. 5, § 56(12)(e), https://www.legislation.gov.uk/asp/2016/18/section/56/enacted [https://perma.cc/B8Q9-XS3L].

oil."[72] This statement, beyond conjuring the image of water wars starting as oil conflicts did, captures the idea that with the rise of climate change, water is a sound financial investment.

What for many years has been a prediction is now a reality.[73] Water Asset Management, an investment management firm based in New York City, is the main water rights holder in many areas in Colorado.[74] It has leased back those lands to the same farmers who were cultivating them before.[75] The role of financial entities such as Water Asset Management is making farming communities and the State of Colorado queasy, illustrating both the effects of such outside investment on the communities and the effects on local and state governments.[76] Small farmers fear the competition of large agricultural companies, and communities fear that outsiders will sell their water rights to faraway cities and compromise the community's future economic development; little can happen without water.[77]

Furthermore, when water is sold outside the community, economic activity decreases because farmers are not producing.[78] But not only farmers are affected; from migrant workers to general stores providing supplies, all suffer the slowdown.[79] Finally, local governments can be dwarfed by the power of those extremely large owners. Colorado's anti-speculation law

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[72] Julian Brookes, *Why Water Is the New Oil*, ROLLING STONE (July 7, 2011, 11:20 AM), https://www.rollingstone.com/politics/politics-news/why-water-is-the-new-oil-198747/ [https://perma.cc/DWY3-Q83S]. For more on the widespread use of this sentiment, see Haggai Scolnicov, *Water Is Not the New Oil*, GREENTECH MEDIA (July 22, 2010), greentechmedia.com/articles/read/water-is-not-the-new-oil [https://perma.cc/FBX6-C4D2].

[73] Michael Burry is famous for having called the subprime lending market years before anybody else. At the end of *The Big Short*, a biographical comedy drama that portrays Burry, it is announced that Burry is moving to invest in water. THE BIG SHORT (Paramount Pictures 2015). Now, many Wall Street firms are following suit. Howe, *supra* note 11; Nelson Schwartz, *Investors Are Mining for Water, the Next Hot Commodity*, N.Y. TIMES (Sept. 24, 2015), https://www.nytimes.com/2015/09/25/business/energy-environment/private-water-projects-lure-investors-preferably-patient-ones.html [https://perma.cc/Z8KS-9C3Y].

[74] Heather Sackett & Luke Runyon, *Western Colorado Water Purchases Stir Up Worries About the Future of Farming*, ASPEN JOURNALISM (May 29, 2020), https://aspenjournalism.org/western-colorado-water-purchases-stir-up-worries-about-the-future-of-farming/ [https://perma.cc/8K2S-R7GG].

[75] Luke Runyon & Heather Sackett, *Colorado Is Examining Water Speculation, and Finding It's 'All the Problems' in One*, KUNC (May 5, 2021, 4:00 AM), https://www.kunc.org/environment/2021-05-05/49olorado-is-examining-water-speculation-and-finding-its-all-the-problems-in-one [https://perma.cc/AGQ3-WVU2].

[76] Thy Vo & Michael Booth, *Colorado Wants to Keep Investors from Flipping Water Rights. Let the Speculation Begin*, COLO. SUN (Dec. 14, 2021), https://coloradosun.com/2021/12/14/49olorado-water-speculation-draft-legislature/ [https://perma.cc/983X-8R9G].

[77] *Id.*

[78] VANESSA CASADO PÉREZ, THE ROLE OF GOVERNMENT IN WATER MARKETS 71–72 (2017).

[79] Vanessa Casado Perez, *Whose Water? Corporatization of a Common Good*, *in* ENVIRONMENTAL LAW, DISRUPTED 79, 82 (Keith Hirokawa & Jessica Owley eds., 2021).

work group acknowledged that concentration of water rights in one person could lead to changes in irrigation organizations' bylaws favoring the powerful owner.[80] Water Asset Management is not the exception. Beyond Colorado, Greenstone—a subsidiary of the financial conglomerate MassMutual—quietly bought the rights to most of Colorado River's water in the town of Cibola, Arizona, bordering California.[81]

In sum, as the examples of Hawaii, Arizona, Scotland, and Colorado have shown, ownership concentration has effects beyond the users of the resource. Small owners may be forced to sell to large, powerful owners because they may not be able to compete. New small owners will have a hard time entering the market. While this may be considered no differently than any other market effect, it has an impact on the communities that were dependent on those small owners conducting business there. Communities fear that powerful, often absentee, owners of resources will disregard the development of the community. As a result, the community will no longer be able to decide its fate because the control of resources will be elsewhere. Furthermore, concentration can make local communities less likely to stand up to the powerful actor and the rules may be tipped in the powerful actor's favor.

In this Part, the examples of ownership concentration in land in Hawaii and Scotland, and in water in Colorado and Arizona, have illustrated the problems with said concentration. The next Part will explore different cases in which deconcentrating measures were adopted to deal with some or all of the problems arising from ownership concentration, including access to ownership by all, effects on small holders, effects on the community at large, and the counterpower to state power.

II. LESSONS FROM NATURAL RESOURCES

There are different ways to deal with concentration in any market. The most common way is to resort to antitrust enforcement and penalize market forces that have led to harmful concentration. Or one could prevent mergers that could result in too much concentration in a market and harm the end consumer.[82] Alternatively, and this is the focus of this Essay, we could also

[80] SB 20-048 WORK GRP., *supra* note 42, § 5.c, at 54.

[81] Howe, *supra* note 11.

[82] *See, e.g.*, FTC & DOJ, ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS § 1.2, at 4 (2000), https://www.ftc.gov/sites/default/files/documents/public_events/joint-venture-hearings-antitrust-guidelines-collaboration-among-competitors/ftcdojguidelines-2.pdf [https://perma.cc/8VC2-NETC] (highlighting market concentration as an important factor in the rule of reason antitrust analysis).

amend the property system behind that market to prevent concentration from emerging.

In natural resources, two groups of measures have emerged: (1) limiting how much of a resource one can hold and (2) requiring certain characteristics of the property owners. The first implies not allowing any one owner to control more than a certain amount of a single resource. Minerals on federal lands, the homestead, or water rights use these types of measures. The latter approach—limiting who can be a rights holder—uses characteristics of the owner as a proxy of potential power in the market. For example, if we require the property owner to be an individual or a family, we expect their wealth not to allow them to accumulate as much property as a corporation would; but of course, there are still some large family-run corporations. Farmland statutes in the Midwest and fisheries regulations in Alaska offer examples of this second type of measure.

All of the measures reviewed below do not aim only at maximizing productivity through the property rights structure, although that may be part of the calculation. They aim to mitigate the effects of concentration on the broader community,[83] both today and in terms of future development. This move is similar to current trends in antitrust theory. While the standard of antitrust has been laser-focused on consumer welfare—analyzing how market structure affects the price end consumers will face—recently the New Brandeis School of Antitrust has approached the inquiry more holistically, looking at the overall impact of companies and market structure on society.[84] For the measures analyzed in fisheries, farmland, and water, the question is not whether the large holding is productively efficient as a unit, but what effects such a holding has on ownership access, the community, and the regulator.

In this vein, when analyzing the different contexts below, it is important to differentiate scale and power, because we often use concentration to refer to both. Scale itself may provide some social benefits, but concentration of social and economic power seldom does. Owning a large swath of land in an area may not go hand in hand with concentration of power, but it often does.[85] Most of the measures may affect scale through rules limiting how much of a resource a single owner can hold to ensure that while efficiency may suffer a hit, other social values and social welfare are advanced. Others adopt

[83] CASADO PÉREZ, *supra* note 78, at 70–71.

[84] *See* Robert Levine, *Antitrust Law Never Envisioned Massive Tech Companies Like Google*, BOSTON GLOBE (June 13, 2018), https://www.bostonglobe.com/ideas/2018/06/13/google-hugely-powerful-antitrust-law-job/E1eqrlQ01g11DRM8I9FxwO/story.html [https://perma.cc/4DH2-WYPE]; *see also* Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 716 (2017).

[85] *See* Glenn et al., *supra* note 61, § 9.1, at 56.

standards to police the conduct of owners who abuse their power without automatically assuming scale is a synonym of power. This is the case with the proposed reform of Colorado's water regime that prohibits speculative aims by large water rights holders.

Measures limiting quantity and the subjects that can be rights holders are not an automatic recipe for success, as the Iowa anti-corporate farmland regulations illustrate, but often move the needle in the right direction. The following cases on homesteads, minerals, fisheries, farmland, and water rights aim to demonstrate how jurisdictions have limited or are planning to limit the amount of a resource someone can own and who that someone can be.

A. Homesteading

The United States' Homestead Acts[86] aimed to ensure the settlement of the West and provide revenue for the federal government by selling federal land. Each applicant received 160 acres. The goal was to give the homesteader the amount of land necessary to have his own independent farm. It would not be a farm like the vast Southern ones that depended on many hired or enslaved hands, but a self-sufficient family farm. To an extent, 160 was a good acreage for a family farm. If we were to focus on pure agricultural output, larger farming operations were, even then, likely to be more profitable. The current struggle of family farms against agribusinesses clearly shows that.[87]

Those 160 acres were also an affordable number. Prior to the Homesteading Act of 1862, the federal government divided the territory into

[86] Homestead Act, Pub. L. No. 37-75, 12 Stat. 392 (1862); Southern Homestead Act of 1866, Pub. L. No. 39-31, 14 Stat. 66; Timber Culture Act, Pub. L. No. 42-277, 17 Stat. 605 (1873) (repealed in 1891); Kinkaid Act, Pub. L. No. 58-233, 33 Stat. 547 (1904) (repealed in 1976), Forest Reserve Homestead Act, Pub. L. No. 59-220, 34 Stat. 233 (1906) (repealed in 1976); Stock-Raising Homestead Act, Pub. L. No. 64-290, 39 Stat. 862 (1916) (repealed in part in 1976).

It is important to note that while the Homesteading Acts did distribute land in small parcels ensuring settlement, not all lands were equal. While the Homestead Act, clearly attracting white settlers, had lands of good quality, the Southern Homestead Act did not. Still, many white people applied for a tract. Thomas W. Mitchell, *From Reconstruction to Deconstruction: Undermining Black Landownership, Political Independence, and Community Through Partition Sales of Tenancies in Common*, 95 NW. U. L. REV. 505, 525–26 (2001) (noting the poor quality of the land reserved under the Southern Homestead Act); ERIC FONER, RECONSTRUCTION: AMERICA'S UNFINISHED REVOLUTION 1863-1877, at 161 (2002) ("Plantations monopolized the best land in the South; public land—swampy, timbered, far from transportation—was markedly inferior.")

[87] Chris McGreal, *How America's Food Giants Swallowed the Family Farms*, GUARDIAN (Mar. 9, 2019, 11:30 AM), https://www.theguardian.com/environment/2019/mar/09/52ritanni-food-giants-swallow-the-family-farms-iowa [https://perma.cc/4NGB-9Q8Y].

six-mile squares, called townships.[88] A township was divided into thirty-six sections, each measuring 640 acres. Individuals could only buy a full section of land at $1 per acre.[89] This was a huge investment for those who wanted to move west, and coupled with the hard—if not impossible when done alone—work to prepare those lands for agriculture, it discouraged many. Later, the section was divided, and the unit of acquisition was 320 acres, but that was still not enough to entice people to move west. Some parties were happy with this reluctance to move, such as owners of factories in the Northeast who feared a westward expansion would leave them without workers, or proslavery Southerners who thought these new landowning farmers may be against slavery.[90]

To acquire title, homesteaders had to file an application, improve the land, and file for the deed. The General Land Office wanted the homestead to be the primary residence of the applicant for at least five years and wanted the applicant to improve the homestead during that time.[91] Given the moderate price of the land, it seems safe to assume the federal government did not want this to be a giveaway to large agricultural productions, although they awarded full sections to railroads to help the expansion—requiring residence achieved that result.

However, as settlers moved to drier parts of the West and the purposes of the homestead changed,[92] so too did the allotments' sizes. This suggests that while efficiency was not a main component, the goal was to balance the viability of the operations with ensuring the settlement of the West and the prevention of windfalls to overly powerful actors. The Kinkaid Act of 1904 granted up to 640 acres per application in the Nebraska Sandhills for just a modest filing fee.[93] The Act required five years of residence before the Three Year Homestead Act reduced that requirement to three years.[94] The period was shortened to attract more settlers. The land covered was nonirrigable land and, as such, more land was necessary to make an exploit viable. Similarly, the Desert Land Entry Act allocated a whole section only if the

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[88] *Northwest Ordinances*, BRITANNICA (Apr. 16, 2022), https://www.britannica.com/event/Northwest-Ordinances [https://perma.cc/4AWU-DBCU].

[89] *The Homestead Act of 1862*, U.S. NAT'L ARCHIVES & RECS. ADMIN., https://www.archives.gov/education/lessons/homestead-act#background [https://perma.cc/ZL2P-8WD4].

[90] *Id.*

[91] *Id.*

[92] Kinkaid Act, Pub. L. No. 58-233, § 2, 33 Stat. 547 (1904); MONTY MCCORD, CALLING THE BRANDS: STOCK DETECTIVES IN THE WILD WEST 31 (2018).

[93] Kinkaid Act §§ 2–3.

[94] PAUL F. STARRS, LET THE COWBOY RIDE: CATTLE RANCHING IN THE AMERICAN WEST 133 (1998).

settler irrigated the land.[95] Not motivated by the terrain but by the needs of a particular economic activity to be developed, the 160 acreage was expanded for grazing: the Stock-Raising Homestead Act of 1916 provided for grants up to 640 acres for cattle ranching, but the settler would not get the mineral estate.[96] Other acts that included limits on acreage when settling on federal land were the Timber Culture Act, which sought to promote tree planting under the theory that it promoted precipitation by allowing settlers to claim 160 acres if forty acres were planted, and the Timber and Stone Act, which authorized settlers and miners to buy up to 160 acres of land with potential timber and mineral resources for $2.50 per acre.[97]

The limits on acreage and the residency requirements of the Homesteading Acts illustrate the antimonopoly principle of U.S. public land policy. This principle embodies the idea of granting access to land to many and ensuring powerful interests do not take control.[98]

B. Minerals on Federal Lands

Federal lands abound. They represent 28% of the land in the United States.[99] Private parties hold oil and gas, mineral, and coal leases on these lands. In fact, the Bureau of Land Management alone administers 700 million acres of subsurface mineral estate.[100]

A single company cannot hold all the rights to this federal mineral estate. Historically, according to the Mineral Leasing Act, each person or company could not get more than three oil and gas leases in a state or more than one in a geological structure.[101] But in 1926 the rule was further refined, adding acreage limitations. It limited each individual rights holder to 7,560 acres in each state and 2,560 acres in a structure.[102] These restrictions were not foolproof. Companies managed to enter into operating agreements with permittees to control and produce on far more acres than the limitations allowed them to without a lease assignment.[103] In 1938, the Department of Interior, aware of that practice, established that the operating agreements

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[95] THOMAS MERLAN, HISTORIC HOMESTEADS AND RANCHES IN NEW MEXICO, at vii (2008).

[96] Stock-Raising Homestead Act, Pub. L. No. 64-290, §§ 1, 9, 39 Stat. 862 (1916).

[97] Timber and Stone Act, Pub. L. No. 45-151, 20 Stat. 89 (1878) (repealed in 1955).

[98] Blumm & Tebeau, *supra* note 15, at 157, 172.

[99] CONG. RSCH. SERV., FEDERAL LAND OWNERSHIP: OVERVIEW AND DATA 1 (2020), https://crsreports.congress.gov/product/pdf/R/R42346 [https://perma.cc/L2XL-VL2S] .

[100] *What We Manage*, BUREAU OF LAND MGMT., https://www.blm.gov/about/what-we-manage/national [https://perma.cc/CX4H-LYNV].

[101] Ross L. Malone Jr., *Oil and Gas Leases on Federal Lands*, 14 MONT. L. REV. 20, 25 (1953).

[102] *Id.* at 26.

[103] *Id.*

counted towards the acreage limitation.[104] In 1946, however, the Mineral Leasing Act was amended to expand the acreage limitation per state to 15,360 acres and abolish the limitations within a single formation in order to allow for larger scale operations.[105]

Today, there are still limitations. No person or corporation shall hold or control oil and gas leases on more than 246,080 acres in one state, except in Alaska.[106] In Alaska, the limitation is 300,000 acres in the Northern Leasing District and 300,000 acres in the Southern Leasing District.[107] The definition of control is broad to ensure that parties cannot work around these limitations—for example, a stockholder of a corporation cannot hold a lease in a given state other than Alaska if that corporation has leased 246,080 acres in that state.[108] Furthermore, there is a limit on foreign individuals or companies leasing energy resources.[109]

The same is true for coal leases:

> No person, association, or corporation, or any subsidiary, affiliate, or persons controlled by or under common control with such person, association, or corporation shall take, hold, own or control at one time, whether acquired directly from the Secretary under this chapter or otherwise, coal leases or permits on an aggregate of more than 75,000 acres in any one State and in no case greater than an aggregate of 150,000 acres in the United States.[110]

The regime for coal greatly contrasts with the regime for nonenergy minerals, which has been criticized for a long time for being a handout to powerful mining companies.[111]

The acreage limitations are not just based on any efficiency calculation. In fact, the regulations clarify that they do not apply to communalization situations, in which operators cannot independently develop separate wells due to well-spacing programs so they cooperatively develop such tracts, or situations in which the parties need to pool resources to build some infrastructure in common.[112] The limits on leasing minerals and energy resources in federal lands are aimed at ensuring distribution of those

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[104] *Id.* at 31.

[105] *Id.* at 32.

[106] 30 U.S.C. § 184(d).

[107] *Id.*

[108] *Id.* § 184(e).

[109] 43 C.F.R. § 3102.2.

[110] 30 U.S.C. § 184(a) (amending the Mineral Leasing Act of 1920)).

[111] *See, e.g.*, Jon Christensen, *Babbitt Attacks Mining's Gold Heists*, HIGH COUNTRY NEWS (May 30, 1994), https://www.hcn.org/issues/12/349 [https://perma.cc/4EX4-FD4H] (relaying criticism of the outdated General Mining Law of 1872, which allows companies to make massive profits by mining public lands).

[112] 30 U.S.C. § 184(f).

resources to avoid concentration of power that could threaten governmental control and energy security.

C. Fisheries

The depletion of ocean fisheries makes our oceans the best example of the tragedy of the commons.[113] The depletion of stocks and the overcapitalization in the industry required a solution, but data was imprecise and jurisdiction fragmented, as the U.S. Comptroller General determined in 1976.[114] One widely adopted solution to this common-pool problem is limiting entry by establishing a cap and assigning fishing quotas. In Alaska, the process to establish fishing quotas for halibut and sablefish took years to develop. The process started in roughly 1976 with the passage of what is now known as the Magnuson-Stevens Fishery and Conservation Management Act, and it concluded in 1995 when an individual fishing quota system (IFQ) was implemented after years of moratoriums on new licenses.[115]

The long discussion on limited entry drove speculators into the market. In addition, during this period, the number of vessels, the average size of vessels, and the technological capacity to capture fish grew. The race for halibut and sablefish intensified, and the fishing seasons substantively shortened. A normal halibut season had previously been 120 days, but overexploitation and the race to fish reduced the season to twenty-four hours. This short length also implied that the working conditions of fishermen were rougher, and safety was often disregarded.[116]

Fishermen in Oregon, Washington, and Alaska had interest in those fisheries. There was tension between longtime fishermen and new fishermen, aggravated by the fact that longtime fishermen were mostly Seattle-based, while the new entrants were from Alaska. The latter feared that most of the fish would go to Seattle-based businesses, which had more capacity.[117]

While there was no shortage of controversy, the dire situation finally prompted a consensus in the 1990s that IFQs were the solution. The IFQ system for halibut and sablefish fisheries in Alaska is still one of the most

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[113] *See, e.g.*, Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1245 (1968). The tragedy of the commons captures the idea that open-access, unregulated resources will be overexploited because each individual will take as much of the resource as quickly as possible without considering the long-term effects since others can do the same. Examples of the tragedy of the commons abound: the atmosphere, aquifers, pastures. or even a common office refrigerator.

[114] Clarence G. Pautzke & Chris W. Oliver, *Development of the Individual Fishing Quota Program Sablefish and Halibut Longline Fisheries off Alaska*, N. PAC. FISHERY MGMT. COUNCIL (Oct. 8, 1997), https://www.npfmc.org/ifqpaper/ [https://perma.cc/3KQM-BPNE].

[115] *Id.*

[116] *Id.*

[117] *Id.*

ambitious undertaken in the United States.[118] Under the initial IFQ system, each fisherman got a quota that they could use during the open season (March 15 to November 15).[119] This eliminates the premium placed on speed that is typical of a rule-of-capture system such as IFQs.[120] The quotas were specific to certain regulatory areas within the Gulf of Alaska and the Bering Sea to avoid localized depletion effects.[121] The initial allocation gave quotas to fishermen currently engaged in the business, either vessel owners or leaseholders. However, crew members got priority if the shares were transferred. The percentage allocated to each person, which was based on their historical capture even if they did not fish every year, was applied to the annual catch to figure out the IFQs assigned on a particular season.[122]

The quotas were also specific to different vessel categories. There were two main types of fixed-gear vessels that seek sablefish and halibut: newer, longer fleet vessels, and smaller catcher vessels which had been catching these species in the area for a long time and took their catch to shore processors.[123] The quotas were not only defined per type of vessel, but also per vessel size within the category.[124] The idea behind this complex system of nonfungible quotas was to ensure that quotas were not accumulated by large owners. If large owners could acquire quotas freely, there would be a full-scale reorganization of the industry, crowding out smaller vessels that operated out of smaller communities.[125] In addition, the North Pacific Fishery Management Council established a community development program for certain disadvantaged western Alaska Native communities. In the Bering Sea and Aleutians area, 20% of the sablefish quota was assigned to these communities.[126] Under the program, 5,626 vessel owners, mostly based in

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[118] *Id.*; Slade Gorton, *Finding a System that Sustains the Pacific Groundfish Fishery*, SEATTLE TIMES (June 10, 2008, 12:00 AM), https://www.seattletimes.com/opinion/finding-a-system-that-sustains-the-pacific-groundfish-fishery/ [https://perma.cc/TY96-NSKX].

[119] Pautzke & Oliver, *supra* note 114.

[120] The rule of capture is a general concept encapsulating the idea that one can be the owner of something (often a fugitive resource) by reducing it to possession. *See* Bruce Ziff, *The Law of Capture, Newfoundland-Style*, 63 UNIV. TORONTO L.J. 53, 55 (2013). For its application to the fishing industry, see ANTHONY SCOTT, MOVING THROUGH THE NARROWS: FROM OPEN ACCESS TO ITQS AND SELF-GOVERNMENT (2000) (describing the competitive nature of restricting the amount of caught fish and the reduction of the need for speed under a quota system).

[121] Pautzke & Oliver, *supra* note 114.

[122] *Id.*

[123] *Id.*

[124] *Id.*

[125] *See* Bonnie J. McCay, Carolyn F. Creed, Alan Christopher Finlayson, Richard Apostle & Knut Mikalsen, *Individual Transferable Quotas (ITQs) in Canadian and US Fisheries*, 28 OCEAN & COASTAL MGMT. 85, 95 (1995); EUGENE H. BUCK, CONG. RCHS. SERV., INDIVIDUAL TRANSFERABLE QUOTAS IN FISHERY MANAGEMENT 9 (1995).

[126] Pautzke & Oliver, *supra* note 114.

Alaska, received quotas.[127] This allocation of quotas protecting small businesses and native communities shows that the concern of the IFQ program was not just ensuring the sustainability of the fisheries, but also the economic and social sustainability of the communities.

In addition to the types of quotas created, there were limits on transferability. Initially, the Council discussed totally prohibiting transfers of quotas, to avoid both consolidation and windfall profits from the transfers, because it was believed that anyone should be allowed to profit from governmentally created quotas on a resource.[128] In the end, the Council decided to not go that far and just set limits on the amount of leasing and selling when the quotas were established. For the first three years, only 10% of the quota could be leased. Catcher boat shares could be sold but only to a crew member. Companies could buy shares only if they had shares assigned to them in the initial allocation. New entrants had to be individuals, already engaged in the trade, and not corporations.

Furthermore, even if sales and leases were allowed, nobody could control more than 1% of the sablefish shares and no more than 0.5% of the halibut tonnage available. There were also limits on the amount of quota that could be used on a single vessel. Initially, quotas had to be traded among vessels of the same size, but later the Council allowed the sale of quotas from larger vessels to smaller ones. The quotas were only assigned and assignable to U.S. citizens and U.S. companies.[129]

This system cost about $2.7 million a year to enforce.[130] Quotas were expected to bring higher quality fish and provide annual benefits from $30 to $67 million. But most important for our analysis is the fact that without the vessel restrictions that prevented the redistribution of catch to the lower cost vessels, estimated benefits were $11–$14 million higher.[131] Yet the Council decided to forgo those in favor of a wider distribution of those lower benefits thanks to the types of quotas and the limits on their transferability. Here, property rights were crafted in a way that increased efficiency but sacrificed their full potential to serve other purposes.[132]

The Council also dealt with an issue that often occurs when there is concentration of ownership: absentee owners. One practice observed has been the owner of vessels hiring skippers to fish his or her fishing quotas.[133]

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[127] *Id.*
[128] *Id.*
[129] *Id.*
[130] *Id.*
[131] *Id.*
[132] *Id.*
[133] *Id.*

This is conceivably similar to a lease. This practice, however, runs afoul of the initial idea the Council had when establishing the system of having an owner-operated fleet. Some cases suggested, though, that not all nonfishing owners were absentee ones and that some owners were really involved in the management of the vessel. And cases have existed in which partnerships had been established. Accordingly, in the late 1990s, the Council responded by grandfathering all skipper-hiring arrangements into true partnerships, sometimes with a cap on the percentage the nonfishing owner could control.[134]

In sum, fishing quotas were established to solve a rampant environmental problem and the depletion of ocean fisheries, but the established regime did not aim to maximize efficiency at any cost; instead, the regime wanted to ensure the viability of small businesses and the future of workers and communities that depended on them.

D. Farmland

Since 1975, Iowa farming legislation has been branded "anti-corporate."[135] It is also relevant to note that as of 2014 Iowa ranked second, following Illinois, in total agricultural rent received at $3.7 billion.[136]

Initially, the Iowa legislature passed legislation prohibiting the vertical integration of feedlots and meatpackers. While those provisions were declared unconstitutional,[137] another one passed: a moratorium preventing corporations from acquiring new agricultural land.[138] This moratorium led the way for the current regulation that still restricts corporate ownership over Iowa farmland. While there are convoluted exceptions, the general idea is that corporate entities (LLCs, corporations, or trusts) cannot lease or own agricultural land. This restriction does not apply to family-owned entities. Family-owned corporate entities must be established for agricultural purposes, owned majorly by people related to each other (as spouses, parents, grandparents, or lineal descendants of grandparents or their spouses), owned

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[134] *Id.*

[135] *See, e.g.*, Kristine A. Tidgren, *Iowa's Anti-Corporate Farming Laws: A General Overview*, IOWA ST. UNIV. CTR. FOR AGRIC. L. & TAX'N (Oct. 25, 2015), https://www.calt.iastate.edu/article/iowas-anti-corporate-farming-laws-general-overview [https://perma.cc/KD44-P82K] (describing Iowa's farming laws as "anti-corporate"); Megan Dooly, Note, *International Land Grabbing: How Iowa Anti-Corporate Farming and Alien Landowner Laws, as a Model, Can Decrease the Practice in Developing Countries*, 19 DRAKE J. AGRIC. L. 305, 320 (2014) (remarking on the same).

[136] Wendong Zhang, *Who Owns and Rents Iowa's Farmland?*, IOWA ST. UNIV. EXTENSION & OUTREACH: AG DECISION MAKER (Dec. 2015), https://www.extension.iastate.edu/agdm/wholefarm/html/c2-78.html [https://perma.cc/58W2-HSFQ].

[137] Smithfield Foods, Inc. v. Miller, 241 F. Supp. 2d 978, 993 (S.D. Iowa 2003), *vacated*, 367 F.3d 1061 (8th Cir. 2004) (remanded on grounds that the statute language was updated).

[138] IOWA CODE § 9H.4(1) (2022).

by people or family trusts, and able to show that 60% of their gross income over the past three years came from farming.[139] This definition has a loophole: it allows a family-owned entity to own land and rent it out, provided the tenant uses it for agricultural purposes.

There is a second exception: some authorized entities are allowed to acquire farmland in Iowa. These authorized entities cannot own more than 1,500 acres and must have been formed for agricultural purposes, cannot have more than twenty-five owners, and must benefit natural people—that is, living human beings—or nonprofits.[140] Iowa farmland thus presents both a limit on quantity and on who can own the resource.[141] The limits on corporate ownership are sometimes constraining for those who want to farm in cooperative or other innovative forms of ownership.

These regulations seem to paint an auspicious picture of Iowa's farmland ownership if one believes concentration should be prevented—assuming family corporations are less likely to amass mammoth holdings—and if a certain economic model of small farming operations is coveted. However, given the loopholes, family-owned does not necessarily mean family-farmed. More than half of the agricultural land in Iowa is owned by someone who does not currently farm; 34% of this land farmed by nonowners is owned by people with no farming experience, and the rest by retired farmers.[142] The trend toward cash leases instead of crop-share agreements is partially explained by the fact that tenants now have multiple landowners.[143]

This trend suggests that while ownership may not be concentrated, agricultural production is more concentrated. Farmland in Iowa is usually intended to be passed from generation to generation, rather than sold on the

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[139] *Id.* § 9H.1(8)–(10), (12) (2022).

[140] *Id.* § 9H.1(3)–(5) (2022). Just as a point of comparison, Minnesota also has similar, but more demanding, restrictions: a nonfamily corporation cannot own farmland, and nonprofits may only own up to forty acres for educational purposes. *See Explanation of Exemptions*, MINN. DEPT. OF AGRIC., https://www.mda.state.mn.us/business-dev-loans-grants/explanation-exemptions [https://perma.cc/U5ZG-GJUG].

[141] IOWA CODE § 9H.4 (2022).

[142] Wendong Zhang, Alejandro Plastina & Wendiam Sawadgo, *Iowa Farmland Ownership and Tenure Survey 1982–2017: A Thirty-Five Year Perspective*, IOWA ST. UNIV. EXTENSION & OUTREACH: AG DECISION MAKER (July 2018), https://www.extension.iastate.edu/agdm/articles/zhang/ZhaJul18.html [https://perma.cc/8MTK-G4RH].

[143] A cash lease implies an agreed-upon monetary, periodic payment. A crop-share agreement implies that the tenant will share a percentage of the crop profits with the landlord. The former places the risk of a bad crop on the tenant; the latter shares the risk between the landlord and the tenant. Traditionally, farmers leasing from farmers have agreed to crop-share leases, perhaps with an implicit sense of solidarity, but larger players are moving the market towards cash leases.

market.[144] This practice is not necessarily positive, as the lack of supply creates a tight market. Ownership is scattered in part because parcels may be divided among heirs.[145] This tight market is also confirmed by the fact that landlords who are retired farmers are, on average, renting out larger parcels.[146] Most farmland is owned by people sixty-five years old or older.[147] Young farmers have a hard time accessing landownership and instead rent, which prevents them from acting with regard to the long-term effects and investment on such land.[148]

In sum, Iowa farmland anti-corporate regulations show that while the aim of the regime may be to protect small family farms and farmers, regulatory loopholes and agricultural production economies of scale make the achievement of the regime's goals less likely.

E. Water Rights

"Prior appropriation" is a regime that allocates water in the American West.[149] Like regimes in other dry jurisdictions, water is not envisioned as a profit-making asset since the water remains free.[150] The anti-speculation doctrine explains that idea.[151] Based on that doctrine, those who hold water rights must use them. They cannot sit on their water rights, waiting to sell them whenever supply is low and the price high. Water must be put to production. If water rights are not used, they can be forfeited.[152] This doctrine has worked well for centuries, but today is falling short at preventing profit-making ventures.

Water Asset Management, a New York-based investment management firm, has bought the majority of the rights to many Colorado mutuals, such as the Grand Valley Water Users Association.[153] Water Asset Management

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[144] Zhang et al., *supra* note 142.

[145] Zhang, *supra* note 136.

[146] *Id.*

[147] Zhang et al., *supra* note 142. In fact, 35% of all farmland is owned by people seventy-five years old or older. *Id.*

[148] *See* Worley, *supra* note 25.

[149] BARTON H. THOMPSON JR., JOHN D. LESHY, ROBERT H. ABRAMS & SANDRA B. ZELLMER, LEGAL CONTROL OF WATER RESOURCES 173–78 (6th ed. 2018).

[150] *Id.* at 174.

[151] *See* Sandra Zellmer, *The Anti-Speculation Doctrine and Its Implications for Collaborative Water Management*, 8 NEV. L.J. 994, 997–99 (2008).

[152] THOMPSON JR. ET AL., *supra* note 149, at 176.

[153] Sackett & Runyon, *supra* note 74; Runyon & Sackett, *supra* note 75; Howe, *supra* note 11. Mutual ditch companies are the main institution distributing water for irrigation in Colorado since the nineteenth century. Mutuals, often incorporated as nonprofit corporations, were created to amass the resources necessary to build water infrastructure for irrigation. Their customers are also their

is complying with the letter of the law, but perhaps not its spirit. In Colorado, it bought water rights and leased them and the land back to the previous owners, so water rights are used.[154] What remains an enigma is exactly what these financial investors are really pursuing.

Some claim they want to play arbitrage.[155] The State of Colorado has water rights buyback programs to ensure the state can comply with the obligations of the soon-to-expire Colorado River Compact.[156] With climate change dwindling supplies and increasing demand, the state can only comply if it pays farmers not to irrigate. If they need water from certain areas or a certain volume, their counterpart will have to be Water Asset Management.[157]

Others believe Water Asset Management is waiting to sell the water, not to the state, but to urban areas in the market once a drought crisis strikes or regular scarcity is insurmountable.[158] These hypotheses ring true given the past conduct of the company. Water Asset Management's CEO has often offered versions of the adage "water is the new oil," such as "Investing in the water industry is one of the great opportunities for the coming decades . . . . Water is the scarce resource that will define the 21st century, much like plentiful oil defined the last century."[159] The State of Colorado has been studying how to amend its water laws to ensure that this type of concentration is avoided.[160]

The attitude of some farmers towards these new entrants in the water market could be perceived as another instance of protectionism. They not only dislike Water Asset Management, but they purportedly also dislike newcomers investing in agricultural land and managing it differently.[161] This is the critique of Eli Feldman, the president of Conscience Bay, a real estate investment firm based in Boulder. Conscience Bay owns a 3,400-acre ranch, Harts Basin Ranch, in Colorado's Delta County.[162] With this ranch,

shareholders. *Irrigation in Colorado*, COLO. ENCYCLOPEDIA, https://coloradoencyclopedia.org/article/irrigation-colorado [https://perma.cc/LU72-RJF6]; Fandi P. Nurzaman, Irrigation Management in the Western States 13 (Apr. 21, 2017) (M.S. thesis, U.C. Davis), https://watershed.ucdavis.edu/shed/lund/students/Fandi_Nurzaman_MS.pdf [https://perma.cc/Z96P-XAJ6]; Barton H. Thompson Jr., *Institutional Perspectives on Water Policy and Markets*, 81 CALIF. L. REV. 671, 687–88 (1993).

154 Sackett & Runyon, *supra* note 74.

155 Arbitrage is the trading practice of buying assets and then selling them in a different market to profit from the price difference. Andrei Schleifer & Robert W. Vishny, *The Limits of Arbitrage*, 52 J. FIN. 35, 35 (1997).

156 Runyon & Sackett, *supra* note 75.

157 *Id.*

158 Howe, *supra* note 11.

159 Schwartz, *supra* note 73.

160 Vo & Booth, *supra* note 76.

161 Runyon & Sackett, *supra* note 75.

162 *Id.*

Conscience Bay owns the highest priority water right, meaning its water right is the oldest—it dates from 1881—and gives it the right to use water from Surface Creek in Grand Mesa first.[163] Neighboring farmers and water managers look at Conscience Bay with suspicion. But Conscience Bay denies that its goal is to engage in water speculation. Instead, the company claims it is in the ranching business, there to raise cattle differently: it produces "organic beef using regenerative techniques that operators say are better for [the] soil."[164]

It is hard to regulate water investment and craft limits on water-hoarding practices that distinguish between those engaging in speculative practices—such as, purportedly, Water Asset Management—and those who are large investors, but presumably do not want to engage in speculation, as Conscience Bay claims.[165] Distinguishing between the two assumes that size alone is not the problem; instead, the aims of the different actors when coupled with size are the problem.

Colorado's water landscape shows the potential difference between scale and power, and between nonspeculative and speculative investment. In 2020, the Colorado legislature passed Senate Bill 20-048 to commission a "Study Strengthening Water Anti-speculation Law."[166] The bill created an anti-speculation law work group, which published its final report in August 2021.[167] The report prompted the Colorado legislature to act, and in January 2022, Senate Bill 22-029 was introduced to curb speculation.[168]

As stated above, farmers may disapprove when entities such as either Water Asset Management or Conscience Bay invest in water rights.[169] Senate Bill 22-029 tries to walk that line with a rebuttable presumption. The bill prohibits water speculation, which it understands as purchasing agricultural water rights with the intent—at the time of the purchase—to profit from an increase in water's price in a subsequent transaction, or to profit by receiving payment from a third party, including the government, for not using that water.[170] The bill then allows each mutual water district to decide which

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[163] *Id.*

[164] *Id.*

[165] *Id.*

[166] S.B. 20-048, 72d Gen. Assemb., 2d Reg. Sess. § 1 (Colo. 2020), https://leg.colorado.gov/bills/sb20-048 [https://perma.cc/C8AJ-3UKY].

[167] SB 20-048 WORK GRP., *supra* note 42.

[168] S.B. 22-029, 73d Gen. Assemb., 2d Reg. Sess. (Colo. 2022), https://leg.colorado.gov/sites/default/files/documents/2022A/bills/2022a_029_01.pdf [https://perma.cc/876L-B9SB].

[169] Runyon & Sackett, *supra* note 75.

[170] S.B. 22-029, 73d Gen. Assemb., 2d. Reg. Sess. §§ 1(1), (6)(a)(I), https://leg.colorado.gov/sites/default/files/documents/2022A/bills/2022a_029_01.pdf [https://perma.cc/876L-B9SB].

percentage of water rights someone must hold to trigger the presumption that the holder is engaging in water speculation.[171]

Concentration of ownership of said rights is the rough proxy for speculation. If the state engineer finds the purchaser engaged in water speculation, the purchaser may receive a fine up to $10,000 and stricter controls over his future transactions.[172] Furthermore, to prevent potential spiteful claims, the state engineer may refer a frivolous or harassing complaint to the state attorney general, who then may bring a civil action against the complainant.[173]

The work group that arose out of Senate Bill 20-048 proposed other solutions, such as taxing all transactions, intensifying the review of any transaction, or limiting the participation of out-of-state entities.[174] But those measures could have affected virtually every transfer, discouraging desirable, nonspeculative transfers that could be a move in the right direction. Interestingly enough, the work group reviewed the Federal Bureau of Reclamation's approach to speculation, emphasizing its acreage limitation, but the group did not put forward any proposal along these lines.[175] The Colorado case shows the embedded idea that water should not be an investment asset, and that excessive profit from a resource can be negative for the community and challenge established state rules.

While Colorado is today's battleground, aggressive water speculation and concentration is not just a problem in Colorado. Claims of water investment by financial companies aiming to speculate and rip off profits plague the West, where water has always been scarce and is getting scarcer as demand goes up and supplies dwindle due to climate change.[176] Water Asset Management itself, via Water and Land, LLC, formed in the State of Delaware, invested in the Humboldt River Basin in Nevada, acquiring Winnemucca Farm and its 36,261 acre-feet of water rights.[177] It went on to file for a water right permit to divert 300,000 acre-feet, the same amount of

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171 *Id.* § 1(2)(b)(II).

172 *Id.* § 1(4)(a).

173 *Id.* § (3).

174 SB 20-048 WORK GRP., *supra* note 42, § 5.c, at 50, 53, § 5.d, at 58.

175 *Id.* at 23.

176 Lauren Sommer, *The Drought in the Western U.S. Is Getting Bad. Climate Change Is Making It Worse*, NPR (June 9, 2021, 5:00 PM), https://www.npr.org/2021/06/09/1003424717/the-drought-in-the-western-u-s-is-getting-bad-climate-change-is-making-it-worse [https://perma.cc/5TNT-URV9]; Howe, *supra* note 11; Schwartz, *supra* note 73.

177 Daniel Rothberg, *Humboldt River, Nevada*, NEV. INDEP. (June 2, 2020) https://projects.thenevadaindependent.com/article/in-nevada-investors-eye-underground-water-storage-as-a-path-to-profits [https://perma.cc/678G-RDSQ]. An acre-foot is 325,851 gallons, about half an Olympic-sized swimming pool. It is the amount of water required to cover an acre in a foot of water. *Glossary of Water Terms*, N.M. OFF. OF THE STATE ENG'R, https://perma.cc/4XQU-MGDP.

water that the State of Nevada is entitled to.[178] Water Asset Management has also invested in Arizona.[179] But it is not the only one; Greenstone has also bought 8,863 acres of farmland and associated senior water rights, the most valuable on the lower Colorado river.[180]

Beyond the United States' borders, Australia's water market is the best example of the perils of concentration in water rights. It justifies Colorado taking action to prevent negative effects of large water investments. Australia's cap-and-trade water-market reforms after its Millennium Drought were the poster child for those who advocated for water markets as the tool to help the dry western United States avoid crises.[181] While the amendments to their water regulations were promising, the results recently made public do not seem to fulfill that promise. Arbitrage was rampant. The Australian government, having approved water-intensive mining projects that drastically reduced the country's supply, was forced to buy $80 million in water from a private company based in the Cayman Islands.[182] Some rural areas still do not have enough water.[183]

Homesteads, minerals and fossil fuels on federal lands, fisheries, farmland in the Midwest, and water rights in Colorado and beyond, show that our natural resource policies have not let the market decide how large its actors could be. Instead, there have been regulations defining rights over those resources that limited the accumulation of those resources in a single owner and who that owner could be. Many of these regulations have defined scale or concentration as a proxy for power. Scale is naturally benign and

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[178] Daniel Rothberg, *Rural Counties Fear Speculation as Company Files to Control as Much Water as Nevada Gets from the Colorado River Every Year*, ELKO DAILY (May 22, 2018), https://elkodaily.com/news/local/rural-counties-fear-speculation-as-company-files-to-control-as-much-water-as-nevada-gets/article_18029ada-be2d-5d0b-9fd8-627ab8b2eb64.html [https://perma.cc/4MDJ-JLY6].

[179] Ian James & Geoff Hing, *Investors Are Buying Up Rural Arizona Farmland to Sell the Water to Urban Homebuilders*, AZ CENT. (Nov. 26, 2021, 11:09 AM), https://www.azcentral.com/story/news/local/arizona-environment/2021/11/25/investors-buying-up-arizona-farmland-valuable-water-rights/8655703002/ [https://perma.cc/VV4L-TKCM].

[180] *Id.*

[181] Brett Walton, *'Transformational' Water Reforms, Though Wrenching, Helped Australia Endure Historic Drought, Experts Say*, CIRCLE OF BLUE (Mar. 19, 2014), https://www.circleofblue.org/2014/world/transformational-water-reforms-though-wrenching-helped-australia-endure-historic-drought-experts-say/ [https://perma.cc/9SR8-4NBD].

[182] Kath Sullivan, *Labor Demands Answers on $80 Million Murray-Darling Basin Water Buyback Deal as Joyce Fires Back*, ABC NEWS AUSTL. (Apr. 22, 2019, 5:15 PM), https://www.abc.net.au/news/2019-04-22/labor-demands-answers-on-murray-darling-water-buyback-deal/11035652 [https://perma.cc/2Z5R-TYK3].

[183] Livia Albeck-Ripka, *As Water Runs Low, Can Life in the Outback Go On?*, N.Y. TIMES (Dec. 8, 2019), https://www.nytimes.com/2019/12/08/world/australia/water-drought-climate.html [https://perma.cc/LP3S-2CPT].

may bring benefits in the form of economies of scale. But the benefits of scale do not necessarily require single ownership. Having fewer owners certainly reduces the number of parties that need to agree, but many believe property law is more than just a coordination device and that it should not facilitate the accumulation of resources.[184]

Often, scale is a synonym for concentration, that is, many resources in a particular geographic market held in a few hands. Concentration can be a problem because while fewer owners imply lower transaction costs, access to property by smaller actors may be impeded by those large landowners who can outbid them or exercise soft power.[185] In addition, larger actors may not bring as many community benefits as smaller ones.

The problem intensifies when scale and concentration translate into power, as it often does. When there is one or few individuals controlling land or another scarce resource in a particular area, those individuals are in a position of power vis-à-vis smaller market players, other community members, and often governmental agencies. This power is perceived as even more dangerous when the powerful actor is an outsider. If the actor is foreign, there are security concerns regarding the control over natural resources. But even within a country, communities feel that entities from other jurisdictions care less about the effects their actions have on the territory.

As the different cases in fisheries, water, or agricultural land have shown, scale, concentration, and control are context dependent. As a result, there is no single recipe to ensure a market where rights over resources are evenly distributed. However, there are variables that matter when considering the feasibility of deconcentrating measures, both quantitative—limits on how many rights someone can accumulate—and qualitative—who can hold rights and how they can be traded—as the next Part will show.

III. FACTORS TO TAKE INTO ACCOUNT

This Part aims to understand which natural resource deconcentrating measures should be enacted to combat concentration. Some of the examples of natural resource concentration mentioned, namely Scotland's land reform and Arizona's groundwater investments, did not lead to aggressive deconcentration measures. Others, such as the minerals and fisheries reviewed in Part II, have resulted in deconcentration measures, from limits

184 *See* Singer, *supra* note 10, at 1326–27 (explaining that systems of property serve a greater purpose than just coordination, in that they also enable life, liberty, and the pursuit of happiness).

185 Joseph Nye, who coined the term soft power, defines it as "the use of attraction and persuasion to achieve goals" in his introduction to JONATHAN MCCLORY, THE SOFT POWER 30: A GLOBAL RANKING OF SOFT POWER 6 (2015), https://portland-communications.com/pdf/The-Soft-Power_30.pdf [https://perma.cc/2Y5E-QZZS].

on total holding to trade restrictions or requirements regarding who can be a rights holder. Building on those successful and unsuccessful cases, there are several factors that matter when establishing deconcentration measures: the existence of established rights, the geographical scope of the market and its fit with existing regulatory bodies, the homogeneity of the users and uses, and the presence of community externalities.

First, many of the reforms covered, like homesteading, were enacted before many appropriations occurred. As such, there were fewer preexisting interests that could block the reform. The same could be said about fisheries in Alaska since those moved from an open access regime to the quota system. However, in the fisheries' cases, preexisting interests were far more entrenched and passing a reform was complicated. Colorado's water regime is an interesting case because the reforms will change the current prior appropriation regime, but the majority of current users will not be affected because the reform targets only large, out-of-state actors who can be very influential but may not carry election votes. Preexisting interests, the need to grandfather those in, and transition costs can make the establishment of deconcentration measures costlier.

The second variable is the geographical scope of the market and how easy it is to define. Establishing how many resources in a single entity's hand are too many is easier to do if the area of analysis—the market—is somewhat circumscribed. Defining when some agent has too much control over a single fishery, or a mutual district, is easier than defining it for an overall land system like in the case of Scotland. This analysis is somewhat like antitrust law's market definition step before assessing whether some company or some merger yields too much power. But it is also different because in antitrust, the definition has two sides: the product definition (which products compete with each other) and the geographic one (where they sell the product).[186]

As such, the antitrust analysis tends to focus on the output market for those companies, while in land and natural resources the focus is on the inputs, which may or may not translate into concentration in the output market. The output of agricultural companies could be sold anywhere in the United States or even abroad, but the effects of the input intake are local. As stated in the Introduction, the deconcentrating measures are not aimed at simply correcting a market failure and ensuring efficiency, but at ensuring access to the resources for smaller users and, in turn, protecting the nearby community. This approach connects with the new wave of antitrust thought

[186] *Markets*, FED. TRADE COMM'N, https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/mergers/markets [https://perma.cc/H2CG-BXGK].

that does not focus only on low prices for consumer welfare but takes a wider view of social welfare and recognizes how giants may offer low prices to end consumers but still have negative societal effects.

Relatedly, whether the scope overlaps with the jurisdiction of a certain agency is a relevant issue, because otherwise a regulator may be ineffective. In the fisheries example, the regulator mapped the scope of the fishery, even accounting for fish being fugitive resources. In Colorado, all mutuals are within the jurisdiction. This also implies that effects beyond the jurisdiction or unit are not captured. If Water Asset Management buys plenty of rights in two Colorado mutuals but the percentage of rights it owns in each is below the threshold each mutual has established to trigger the anti-speculation provisions, Water Asset Management will escape review.

The third variable is the relative level of users' and uses' homogeneity. If every user of the resource is engaged in the same activity, it is easier to calculate what amount of resources is reasonable to be viable in producing a particular output than if users differ a lot in their output types and need different amounts of input. This explains why establishing limits on the number of quotas a fisherman can hold is easier than setting limits on the amount of land an owner can hold in Scotland. Land has multiple uses; even agricultural crops may need different scales, and it would be very hard to define up-front how much land is too much. The same is true of water. This may explain why Colorado's bill did not include some of the more interventionist measures advanced by its anti-speculation law work group. The proposed measures—such as tying water to land or imposing time limits on ownership turnover—would have targeted every single transaction, large and small.[187]

Fourth, and relatedly, the presence of identifiable community externalities may move regulators to introduce deconcentrating measures. Ensuring the distribution of the resource among its direct users is certainly a motivation of the deconcentrating measures, but in many cases, the distribution also benefits other members of the community. The halibut fisheries illustrate this point: the limit of the percentage of quotas held and the preservation of small businesses were in part motivated by the intention to ensure that economic activity did not dry up in small harbors.

CONCLUSION

Concentration in the ownership of any resource can have deleterious effects; land is no exception. While scale may have benefits, if concentration goes hand in hand with power, as it often does, it has negative effects.

[187] SB 20-048 WORK GRP., *supra* note 42, § 5.b, at 45, § 5.d, at 55.

Concentration makes access to the resource difficult for smaller agents, and it can create a counterpower to the local government when a large actor or group of actors seize control of ownership and distribution of a resource. Concentration also produces community externalities in situations where the owner ignores the local community's needs, jeopardizing the future of the local community.

In most markets, antitrust laws control for concentration either before a merger or when illegal conduct is suspected. In natural resources, antimonopoly policies have been implemented for limiting property rights by setting up a maximum amount of the resource someone can own or limiting who the owner can be. From fisheries to homesteading, Iowa farmland, and mineral rights, we have imposed limits on property rights over certain resources. The deconcentration measures found in natural resources do not only have efficiency in the particular market in mind, but look at the impacts of concentration on the local community as a whole.

Whether the measures from fisheries in Alaska or water in Colorado can be transplanted to land elsewhere will be context dependent, but those cases where measures have been adopted present the following characteristics: a defined, somewhat local, market; certain homogeneity of uses and users; and identifiable community externalities. These characteristics are neither necessary nor sufficient but may facilitate legislators' and regulators' actions.

Comparing regulation of fisheries to potential responses to the purported land grab by Google in the Bay Area illustrates these three characteristics.[188] Fishing quotas are only coveted by fishermen—and perhaps environmentalists—while land is useful to many for very disparate reasons. Fishing grounds are somewhat easier to delimit than the appropriate land market to assess the level of concentration of ownership in the Bay Area. Furthermore, the connection between small fishermen and their community is more palpable and assessable than between different landowners and plots of land in Mountain View, although the latter connection is undeniable. The growth of Google and other tech giant campuses has clearly gentrified the poorest neighborhoods in the area, displacing longtime residents.[189]

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[188] *The Great Silicon Valley Land Grab*, CMTY. LEGAL SERVS. IN E. PALO ALTO, https://clsepa.org/media-great-silicon-valley-land-grab/ [https://perma.cc/8KAG-ASQH]; Jack Nicas & Jim Carlton, *Google Makes Nevada Land Grab for Data Center*, WALL ST. J. (Apr. 17, 2017, 6:57 PM), https://www.wsj.com/articles/google-makes-nevada-land-grab-for-data-center-1492430404 [https://perma.cc/D2QZ-V8T8] (describing Google's new data center neighboring Tesla's Gigafactory).

[189] *The Great Silicon Valley Land Grab*, *supra* note 188.

Given the wealth concentration in the United States and the increased scarcity of many natural resources, adopting measures to check such concentration in land and elsewhere could be advisable. Doing so would honor the antimonopoly principle that pervaded the historical allocation of rights over public lands and that is present in many other natural resources regimes. This Essay aims to start this conversation.