WORKING PAPER

No. 20

North America Series

October 1998

Who Owns Natural Resources in the United States and Canada?

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Land Tenure Center

AN INSTITUTE FOR
RESEARCH AND EDUCATION
ON SOCIAL STRUCTURE,
RURAL INSTITUTIONS,
RESOURCE USE,
AND DEVELOPMENT

UNIVERSITY OF WISCONSIN —
MADISON

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Prepared for the North American Program of the Land Tenure Center of the University of Wisconsin–Madison. This publication was partially supported by the College of Agricultural and Life Sciences, University of Wisconsin-Madison, and by grants from the Ford Foundation, the Otto Bremer Foundation, and the W. K. Kellogg Foundation.

All views, interpretations, recommendations, and conclusions expressed in this paper are those of the authors and not necessarily those of the supporting or cooperating institutions.

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WHO OWNS NATURAL RESOURCES IN THE UNITED STATES AND CANADA?

by

M. Patricia Marchak[1]

I. INTRODUCTION

If there is only one point you will recall from this paper, please make it this: property rights are social definitions, not made in heaven. They exist as long as the society is willing to enforce them. If enforcement is missing, they cease to exist.

The reasons for changes might be market conditions, popular sentiments, scientific knowledge, new technologies, lobbying, or legal battles. Biotechnologies are already having profound effects on how we organize property rights for natural resources. To give you some examples:

In feudal Europe, landowners had unfettered rights to kill wildlife and to plant, use, or destroy land on their estates. Today, forestry companies are restricted in their logging operations so as to protect wildlife and habitat, and farmers do not have unfettered rights to sow whatever crops or to apply whatever fertilizers they wish. Wildlife is not owned in most of North America, and hunting rights are licensed by the state.

Not too long ago it was merely a disagreeable fact of life that smelters and pulp mills emitted foul odors and pollution into the air and rivers. Today, air and water are considered too valuable to allow such practices to continue, and companies are obliged to clean up their acts.

Gold had huge value until very recently; investors changed tactics and suddenly gold is in excess supply. Oil was unimportant a century and a half ago, of primary importance during the present century, and may be displaced in the next century. Water will probably be the most valuable resource in the next century, even though it is distributed almost free of charge in much of North America today. Some tree species were considered to be junk until new pulping and construction technologies were devised to utilize them, and that happened because we had depleted many of the species we did value.

I believe we are witnessing a radical shift in Canada today over aboriginal rights to natural resources. For the past century and then some, European settlers either ignored aboriginal claims or obliged First Nations people to sign treaties that forced them to live on reserves; even after that, if the reserves turned out to contain minerals or forests of value, of if the land was close to an

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expanding metropolis and desirable for urban development or golf courses, the people were pushed off and relocated.

In the past two decades, First Nations bands in Canada have been mounting legal challenges to these expropriations, and though they have suffered many setbacks they are, now, gaining legal as well as social support for their land claims. A process involving bands and the two main levels of government has been undertaken to negotiate claims. A recent court decision refers to the province of British Columbia, where few treaties were signed and aboriginal title was never relinquished to most of the territory. The Delgamuugw decision states that aboriginal rights exist and that oral history must be taken as evidence; the court encouraged governments to negotiate agreements with First Nations claimants. Negotiations were already in progress with the Nisga'a of the Nass Valley in British Columbia, and these have now been concluded. The Nisga'a have waived further claims in return for some 2,000 square kilometers of land, including about 45,000 hectares of forest land.

The important Alaska Native Claims Settlement Act (ANSCA) of 1971 created the Alaska Native regional corporations. The state of Alaska was divided into 12 geographical regions, each with a regional corporation whose members or shareholders are Native peoples born in or now residing in the region. Land surface rights are held by village corporations mainly, but some 16 million acres are held by the regional corporations. All the subsurface rights are held by the regional corporations. This process may not have been the ideal solution for land claims in Alaska, but that is another issue; the issue I address here is simply: Who owns the resources? Under the ANSCA model, the native people of Alaska through their corporations own a large share of the resources in that territory.

So it is that resource rights do change as our understandings and sentiments change.

II. DISTINCTIVENESS OF NATURAL RESOURCES

Natural resources are unlike widgets and wine bottles even when they are treated as commodities on markets. Their difference lies in the fact that whatever is done with resources may affect many others besides the formal owners, and may affect other species and may have consequences for future generations. That is why property rights in natural resources are always contentious and subject to change.

A. OWNERSHIP REGIMES

There are various ways of organizing ownership in natural resources. I will briefly describe some of the arrangements in our era.

1. Open access

There are resources that are not owned. They include the air we breathe (but not airspace as used by airplanes), and the deep ocean bed (but not those parts of the ocean bed that are claimed by nation states, and there is some contention about areas containing offshore oil or minerals). Some portions

are not owned because states have agreed to let them be unpossessed. These include the continent of Antarctica and outer space (although the United States, even so, planted its flag on the moon). These are set apart by the Antarctic Treaty of 1959 and the Outer Space Treaty of 1967.

Resources that are not allocated to any owners are not common property, which has a very different meaning. There is a problem with resources that are not stewarded by any particular set of owners if everyone uses them and no one takes management responsibilities. We are beginning to recognize this problem in the ocean and the atmosphere. Greenhouse gases and ozone depletion are consequences of the inability of large populations to steward resources to which there is open access. However, there is no simple solution because these resources are not containable within national or regional boundaries. There is a need, not yet embodied, for international management regimes.

2. International regulation

Over the past few decades, the rights of nations, corporations, or individuals to own nature and to pollute nature have been slightly delimited by international treaties, including the Law of the Sea (1982), the Montreal Protocol on Substances that Deplete the Ozone Layer (1990), the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (1989), and the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1973 and 1979). In addition, there are a number of bi- and multi-lateral agreements between nations, establishing conditions to reduce their mutual assaults on particular natural environments. The North American Free Trade Agreement (NAFTA), deeply flawed though it is, is an example of such contracts.

3. Communal/common property

The "tragedy of the commons" thesis is misnamed and seriously misleading. What has happened is that "open access" conditions have become confused with "common property." Commons, historically and today, are not open access territories; they are areas co-owned and actively stewarded by a specific community. A very small portion of North America is formally owned by aboriginal and other communities who generally practice some form of common property management. Other groups, particularly communities that have engaged in inshore fisheries over several generations, have also practiced common property management.

Where co-owners are also co-managers of a territory and its wildlife, they behave much as any other owner/managers, sometimes well and sometimes less well. In effect, this is actually private property where the owner is more than one individual or corporation.

4. State ownership

The state in the world system of nation-states is almost everywhere the major formal owner of natural resources. Nations claim ownership of vast territories, including all the land and water within their borders, the oceans bordering their land base up to 200 miles offshore, vast ocean bed mineral and fuel resources, wildlife and fish that inhabit these lands and waters, and the air space immediately above their land base.

However, this formal ownership is often by way of establishing a legal origin for parceling out property rights to citizens or others under the jurisdiction of the state. The nation state retains active ownership and management responsibilities for some resources where they have no established commercial value, are too expensive for private owners to manage, or have been transformed into public parks and wilderness areas.

5. State ownership/private tenure rights

With respect to both renewable and non-renewable resources, the state leases out extraction and harvesting rights to private corporations. These usufructuary leases delimit the rights of private organizations while allowing them to reap profits from state-owned and publicly managed land. For example, the outer continental shelf of the ocean contains vast deposits of oil and gas, and these resources are exploited by private companies under government leases. In forestry, timber sales and various kinds of harvesting rights are provided to the private sector. Sub-surface mining rights are leased to private corporations while the state or even private farmers might own the surface land.

6. State regulation

In most of these cases, the state has a regulatory role once it has allocated extraction or harvesting rights, and it is in their role as regulator that states manage resources, well or badly, and adapt or fail to adapt, to changes in markets and public attitudes. Regulation also takes the form of general environmental or economic policy. In the United States and Canada there are many specific legislative acts limiting the extraction, pollution, transportation, and other activities related to air quality, solid wastes, toxic substances, water, minerals, fuels, noise, land use, and land or marine mammals.[2]

7. Private ownership of natural resources

Private ownership is much more complex than state ownership. Some rights are permanent, some temporary; some are absolute and exclusive, others are reined in and may oblige the owner to share; some are secure, others not; some may be transferred, others belong only to one owner and can never be sold or given away. Some can be divided, others not. These differing characteristics depend in large part on governments and courts, because property rights are rights only in so far as they can be enforced. However, laws are not easily changed, and when societies want to increase public power over resources they generally have to acknowledge previous private owners through compensation. And this is so even if the private owners were there only because the state granted them usufructuary rights.

[2.] US examples include the National Environmental Policy Act (1969), the Air Quality Act (1967 and subsequent amendments), the Clear Air Act (1970 and amendments), the Solid Waste and Resource Recovery Disposal Act (1965 and amendments), the Toxic Substances Control Act (1976), the Federal Water Pollution Control Act (1948 and amendments), the Safe Drinking Water Act (1974), and the Surface Mining Control and Reclamation Act (1977), as well as many other acts dealing with chemicals.

At the end of this century, large corporations own substantial areas of forest and other land, sub-surface rights, and other resources, either absolutely and exclusively or through usufructuary rights granted by the state. Public ownership is frequently combined with private exploitation rights; private ownership rights are frequently regulated and controlled by the state. What matters, then, is not so much who formally owns them, but the conditions of ownership.

In passing, we might note that the United States and Canada have different histories and cultures with respect to property rights in natural resources. Canada, because it is a huge territory with few people, developed an extensive network of public corporations formally owned by what we call "the crown," but managed at arms' length from any particular government. Private ownership has always been more prevalent and is given much greater prestige in the United States.

B. SPECIFIC RESOURCES

Now let us consider the major resources of water and land to get an idea of the complexity of the issues.

1. Water and offshore resources

Water will be the most valuable resource of the next century. It is necessary to life on earth. Large parts of the southern United States and Mexico have insufficient water to maintain the irrigated agriculture, golf courses, urban settlements and affluent lifestyles that have been situated on the land. Local rivers have already been diverted and overused; water tables have been lowered to the point where these settlements will have to be abandoned unless more distant rivers are diverted to their use.

As a Canadian I am very much aware that the more distant rivers are in the north of this continent, and that diversion of them would create ecological disasters all along the way. In addition to that possibility, there are demands for hydroelectric power to be generated by damming these same rivers, and yet other demands for rights to sell water from the Great Lakes. All of these are extremely worrisome to environmentalists on both sides of the border, and fears have grown as the implications of NAFTA become recognized.

In the spring of 1998, a private company persuaded the provincial government of Ontario to give it the right to extract water from Lake Superior, apparently intending to procure an export market for the same. When this came to light, it became a major scandal and had the Canadian federal government scrambling to find a legal way of voiding the contract, even though the amount of water was small.

As is now recognized by the Canadian government as well as environmentalists, under NAFTA the export of even a small amount of water immediately obliges the Canadian government to allow all water to be treated as a commodity, available on demand at the same commercial rates to any company on this continent. This interpretation has been discussed frequently in environmental circles as a hypothetical possibility, but when the reality suddenly happened the Canadian government acknowledged that the definition of tradable goods under the General Agreement on

Tariffs and Trade, now the World Trade Organization, and NAFTA, includes water if it is once traded. If the tap is turned on, it cannot be turned off (see Marchak 1998).

2. Stream water and ground water on privately owned land

Northern rivers and lakes are the major concerns at this juncture, but water running through or under privately owned land is also a natural resource with contentious features.

I will resist the temptation to go on at length about the interesting history of legislation over rights to use these waters and note only that private ownership of land has usually been the determining factor. If you own land, you usually have riparian rights to stream water and seniority rights to groundwater. Put simply, this system allows the owner at the top of hill to use up or pollute water needed by those at the bottom of the hill. As well, there are many ecological problems in the over-use of groundwater.[3]

[3.] Re: *streams*, two main types of water rights have been recognized since medieval times in Britain and in North American history. One is based on land or riparian rights, giving the landowner control of water on his/her property, and in some cases this control exists irrespective of impacts on downstream users. The other is based on use, where the rights exist only where water use exists; rights are specific as to quantity and type of use and the first user has the strongest rights. This is the basis for what is known in the United States as rights of prior appropriation. In the United States, from about the 1850s onward, appropriative rights emerged in mountainous and western regions that were then at the frontier. These were individual, use-based rights with seniority as the guiding principle of allocation. They emerged with the demands for water by gold miners, homesteaders, and logging operators. The early settlement history of North America is still evident in the laws, with systems of "reasonable-use, riparian water rights" in the eastern states, and systems of "appropriative" or use-based systems in states west of the 100th meridian. Over the twentieth century, ecosystem damage, industrial pollution, and undrinkable water became problems in need of new solutions. Changes in the laws were introduced earlier in Britain, where the problems and population densities were most evident. The pressures experienced there and in Europe are now being experienced in North America. Legislation has not yet caught up with contemporary realities, but this is one of the areas where public interests are being articulated and pressure exerted on legislators to change long-standing laws and conventions.

Re: *groundwater*, that is, water held underground in clay or other porous strata. It may be tapped by wells, and as the water is pumped out the water table generally declines. If pumping exceeds the inflow, the drop may cause serious environmental and social damage. Among the environmental effects is saltwater intrusion and contamination if fresh groundwater is drawn down too far. Among the social impacts are unequal access to water where upland or upriver well owners deplete resources that are then not available to downstream users. Both environmental and social impacts include subsidence of land where underlying water has been depleted. Groundwater, in common with streams running through private land, is governed by legislation that gives an owner the right to tap the resource as he/she sees fit. Downstream users in general have no or few rights, and the community of users or any others affected by reduced water table and subsidence problems have no legal recourse. (Useful references are: Scott and Coustalin 1995; Todd 1992.)

3. Land

About a quarter of all land within its political boundaries is owned by the US federal state. The proportion varies by state. For example, federal land acreage in Alaska comprises about 60% of the total land, much of this in unusable condition, and other parts in wildlife regions. Wisconsin, by contrast, has only 5% of its total land under federal control (Nelson 1982). Individual states also own land, and between the two levels of government about a third of all land in the United States is state owned.

In Canada, land and resources are within provincial jurisdiction so the federal state formally owns only a few national parks and wilderness areas, and reserve lands for First Nations peoples. Provincial governments generally retain public lands and charge resource rents for harvesting or mineral rights.

4. Agricultural land

Apart from reserve land and First Nations land claims, land is typically categorized in terms of uses as urban or developed, industrial, agriculture, or forestry. Most agricultural land is still in private ownership, and most private owners are families or individuals. In North America during its settlement phase, homesteading and small farms were optimal ways of distributing space and ensuring that food and fiber crops would be grown. In this respect, incidentally, North America differed from South America, where landownership was highly concentrated from the beginning of European settlement, and even today large estancias are typical of much of the continent.

Though small family-owned farms had many social benefits in an earlier history in North America, they might not be the optimal forms today. To begin with, there are social concerns with aspects of farming—use of pesticides, for example, or planting crops in excess of market demand or which are ecologically or socially dangerous for another crop—that can be addressed only if the society, via the state, has the right to delimit and sometimes curtail ownership rights.

Some rights are already restricted, with respect to wildlife, fish, and even rare plants on properties, limitations that were unheard of a generation ago. Thus the state has become more involved with privately owned land as non-owners have gradually realized that their rights, or the rights of future generations and of wildlife, may be affected by exclusive and unrestricted private ownership.

One of the most pressing issues with respect to privately owned agricultural land is the relative market values of farm and development uses. Where land values for urban development, plantations, or industrial use exceed returns on farm production, owners would profit from land sales. For this reason, the material values of land in a market society are of social concern and the question arises: Should society artificially peg the value of land so that it remains stable irrespective of external pressures for development? Some states have legislated limitations on the capacity of private owners to turn agricultural land into urban developments, or to transfer land for that purpose. There clearly is a public interest in the uses to which land is put and how it is evaluated; this is one of many areas where allowing market forces to determine outcomes may be highly detrimental to a natural resource and to society in the long run.

Another serious issue in agriculture is agribusiness, the growth of very large, usually multinational corporations that have either purchased land or contracted for the produce of farmers' land. Large corporations can, however, control agriculture without owning land by controlling the inputs (fertilizers, seeds and the like), produce markets, and transportation and storage facilities. Agribusiness interests are strong in the international grain trade and trade in fresh and frozen vegetables and fruits. Thus, ownership of the land resource may not be the most important variable if we want to understand the power relationships in agriculture.

5. Forest land

The most valuable resource on public forest lands is timber. In North American forests, timber has been regarded as virtually the only forest resource, so that other products of standing trees (such as resins, oils, and medicinal properties) or of other plants have been generally undervalued or overlooked.

In most of Canada, nearly all forested land is owned by the crown, in this case, provincial crown (we distinguish between governments of the moment and the state in the use of the term crown). Companies have benefited from this, as the crown generally has had the obligation to manage and replant forests, while the companies have enjoyed harvesting rights at very low resource rents. Canadian resource rents have increased dramatically in the past decade, however, in response both to environmentalist demands and US lumber producers' claims against Canadian state subsidies.

In the United States, about half of all standing softwood timber is formally owned by one or other level of the state. Wildlife on state lands is also owned by the state, as is water running through them. Owners of the other half of forest lands include private farmers or others who own small woodlots and corporations of various sizes.[4]

Among the corporations are very large ones such as Boise Cascade, Weyerhaeuser, Bowater, Champion International, Stone Containers, Jeffery Smurfitt, Georgia Pacific, Kennecot, Abitibi, Scott Paper, and Pope Talbot. Altogether, industrial forestlands constitute about 71 million acres. Corporations have steadily increased their proportion of forest land relative to state and private agricultural lands (Clawson 1982). Much of this land area is in the southeastern states.

The European and Japanese tradition of small woodlot owners, who plant and nurture private forests for industrial purposes, is not replicated in most of North America, though there are exceptions such as parts of the Maritime provinces in Canada. There are also very few village cooperatives in forestry, a form typical of Japan and still found in northern Thailand though it is disappearing fast as large corporations take control of tropical forests throughout Asia.

Logging operations in both Canada and the United States now face increasing demands for environmental protection. Practices that in the past left degraded mountain slopes, severely damaged streams, clear-cut regions with no wildlife corridors, destroyed wildlife habitat, have been

[4]Private forests are not as encumbered as public forests, but they are not free of regulation with respect to streams, logging operations, and protection of wildlife habitat. In the United States, the Multiple Use and Sustained Yield Act of 1960 extends to private land.

curtailed; the state's harvesting contracts demand environmentally sustainable logging. Whether they achieve that or not is another issue; my point here is simply that changes in public awareness and demands have had an important impact on the rights of harvesters—such rights are property rights even if they do not own the land itself—to log in traditional fashion.

6. Wildlife

Wildlife participates in forest and agricultural land arrangements and may be thought of as a natural resource in its own right. Legislation in both the United States and Canada has generally recognized the impossibility of private owners controlling wildlife on their properties. This is because farming in North America's early settlement history was carried on largely by small landowners rather than on large estates, also because the wildlife that still inhabited this continent as European settlement took place included many migratory animals, many animals that required very large ranges, and animals that could not be controlled by single landowners. More recently the environmental movement has made legislators more aware of habitat for wild animals, and legislation has been established which effectively reduces private landowners rights over both wildlife and habitat regions.

Some of this legislation, however, has turned out to be detrimental to wildlife. Farmers sometimes utilize their land in ways that will remove the likelihood of animals or birds establishing themselves there, so as not to inhibit their use of land because an endangered species has a prior claim on it (Lueck 1995). Thus private ownership of agricultural and forest or other land, has impacts on wildlife even though the wildlife itself is not owned by the private landowners.

7. Fuels

I will but briefly mention property rights to the exploitation of oil and natural gas. Across North America this right, which is granted by the state to huge private companies, has enjoyed numerous tax and special regulatory treatments. The explanation has to do with the enormous economic rents the state could derive from state leases (Church 1982). In Canada, where the major oil and gas reserves are located in the western and northern regions of the country, taxation, exploitation policies, and capture of resource rents have followed a different path than in the United States, but the overall theme is similar: a level of the state owns the resource and leases out exploitation rights (Church 1982 provides a US interpretation of resource use conflicts between the federal and provincial governments with respect to fuels). The Mexican state formally owns and controls oil, but its property rights are going through considerable erosion under the terms of NAFTA.

8. Biotechnology

Finally, I want to mention biotechnology as a potentially significant influence on how we organize property rights in the future. The eucalyptus trees that provide the fiber source for a highly competitive pulp-wood forest industry in southern climates are but one result of genetic engineering. Farm-reared Atlantic salmon or other fish maintained in conditions that no wild fish have ever before experienced provide another example. In both cases there are deep ecological

concerns about monocultures and the spread of disease to wild stocks, but there are also advantages to developing countries and fish-food industries.

Agribusiness, already a worldwide phenomenon before biotechnological developments, is now joined to the applications of molecular biology. Such agribusinesses could provide more food options, improved food and cattle feed quality, higher yields and other benefits as industry spokespersons emphasize. They could also create monocultures, control food and feed supplies, and become monsters of the 21st century as pessimistic forecasters fear.

Wisconsin dairy farmers were confronted with one potential consequence of biotechnology a few years ago when the effects of bovine growth hormone was found to increase milk yields in dairy cattle. Farmers feared overproduction and reduced prices. There were also fears of reduced safety of milk (Busch et al. 1991). In the case of the farmers, and in several other cases involving genetic engineering of crops, government regulation or injunctions to suspend work and orders to stop research have been sought and occasionally obtained. But biotechnology will not go away, and I think that those of us who are concerned with property rights involving natural resources must extend our concern and knowledge to human restructuring of nature.

III. Conclusion

My objective in this paper was to present a general overview of property rights in natural resources, with particular reference to water and land. I want to emphasize what I wrote in the introduction: rights are what a society is willing to grant and enforce. If companies, individuals, groups, or the state are not managing and stewarding resources in sustainable ways, we should challenge their authority. Rights are social inventions, and society can abrogate them.

I also emphasize that markets, technology, scientific knowledge, and attitudes define resources and sustain current regimes; these change over time, and any property arrangements we have today are subject to change at any time. The important thing is to recognize that the choice is a social choice.

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