

ECONOMIC DEVELOPMENT AND CULTURAL CHANGE

Volume 53, Number 1, October 2004

Institutional Assets for Negotiating the Terms of Development:
Indigenous Collective Action and Oil in Ecuador and Alaska

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Introduction

In 1994, ARCO discovered commercial quantities of oil in the Colville Delta on the Alaska North Slope. The find was on Alaska Native village corporation lands 8 miles from Nuiqsut, an Inupiat Eskimo community of 490 residents. A package of benefits for the community that included rents and royalties, jobs and training, subsistence and environmental oversight, and a supply of natural gas for local power generation was negotiated by ARCO with the village corporation. The value of these benefits is currently estimated at more than \$5 million per year. The field started production in November 2000 and produces about 100,000 barrels per day—more than double the original design. It is now operated by ARCO's successor, Phillips.

In 1992, ARCO discovered commercial quantities of oil in Pastaza Province in eastern Ecuador. The find was on indigenous lands in a remote area of the upper Amazon jungle. Nearby are 14 mostly Quichua communities with a combined population of about 2,000. About \$500,000 per year for community assistance projects in the areas of basic health, education, transportation, and communication are provided by ARCO and its successor Agip. The field started production in July 1999. Although the field is designed to produce 40,000 barrels per day, production is currently restricted to 30,000 barrels per day due to capacity constraints in the trans-Andean pipeline.

These fields are superficially similar: both are ARCO fields developed in the mid-1990s in remote, environmentally sensitive regions, with innovative roadless designs and extensive involvement with local indigenous populations. (See table 1.) But they have very different economic outcomes for the communities. Why? In this article, I explore major factors underlying the differences.

This research was supported by the National Science Foundation. I acknowledge and appreciate the very helpful comments by Stephen Cornell, Bruce Horowitz, and Herb Vickers on earlier drafts of this article. In the end, however, I alone am responsible for any errors or omissions.

TABLE 1
A TALE OF TWO OIL FIELDS

	Villano	Alpine
Company	ARCO/Agip	ARCO/Phillips
Field design	Roadless remote	Roadless remote
Estimated reserves (millions of barrels)	190	300
Date of discovery	1992	1994
Start of construction	1998	December 1997
Start of production	July 1999	November 2000
Rate of production, barrels/day*	30,000	100,000
Local population	2,000	490
Ethnicity	Quichua	Inupiat
Estimated value of local direct benefits (\$)†	500,000	4,500,000

* Prior to construction, both fields were planned to produce 40,000 barrels per day. The Alpine field turned out to have better geology than anticipated, while Villano's production has been limited by unanticipated constraints in pipeline capacity.

†See table 4.

Literature Review

The foremost body of research on Indian economic development in the United States has been produced by the Harvard Project on American Indian Economic Development (Cornell and Kalt 1992, 1995, 1997, 2000; Cornell 1997). What they have learned can be summarized in three key concepts:

1. *Sovereignty matters.* Tribes do better when they themselves make the decisions over tribal affairs and resources. Not only is the tribe more in tune with the goals of the community than are outsiders but they themselves bear the consequences of the decisions, good or bad, so they have the most incentive to learn to make good decisions.

2. *Institutions matter.* Sovereignty is not enough: tribes must also be able to exercise power effectively. There are three key elements: business management separate from the political leadership, an independent judiciary to resolve disputes, and effective bureaucracy to get things done.

3. *Culture matters.* For the institutions to be effective, they must be legitimate in the eyes of the community. For them to be legitimate, they must fit with the community's beliefs about how authority should be organized and exercised.

The key to economic development is political development: developing the institutional infrastructure capable of supporting sovereign decision making and collective action. But where do these institutions come from?

Cornell and Kalt's thesis is consistent with the paradigms expressed by the various authors in *Rethinking Institutional Analysis and Development* (Ostrom, Feeny, and Picht 1993). Wynne (1993) explores the cultural resources that provide material for institutional development. Oakerson (1993) emphasizes the primacy of local units of collective action in creating the requisite norms of trust and reciprocity serving as building blocks for higher levels of political organization. Sawyer (1993) highlights the importance of governmental recognition of local decision-making authority, a key element of sovereignty.

Feeny (1993) develops the theory of demand and supply for institutional innovation. Demand for new institutions arises when agents realize there are more gains that could be captured under different institutional arrangements. Both rent seeking—shifting the distribution of benefits away from others and toward oneself—and opportunities to increase production through innovation or efficiency gains come into play. Supply depends on the capability and willingness of the political order to provide new arrangements, considering factors such as the constitutional order governing the development of new institutions; the starting point and raw materials for fashioning alternatives, including existing institutional arrangements, knowledge and skills, and cultural resources; the cost of design and expected cost of implementation; and the expected benefits to dominant political elites.

Elinor Ostrom (1990) wrote the classic work analyzing the autonomous development of institutions for collective action. The cornerstone of her thesis is that people who live and work closely together learn trust and reciprocity, and this social capital is a primary resource for creating institutions to solve joint problems. Factors that foster this development include small numbers of people (enough to handle the scope of the problem) in a local setting with similar interests, leadership, and a low enough discount rate. She also emphasizes the incremental, self-transforming nature of institutional change, the importance of information and transaction costs, and the role of external political regimes (Ostrom 1990, p. 191).

Ostrom identifies eight design principles governing the durability and effectiveness of local institutions.¹

1. Clear boundaries and membership: who has rights to share the benefits must be clearly defined.
2. Congruent rules: the rules for providing and appropriating benefits must fit the conditions.
3. Collective choice arenas: most individuals affected by the rules can participate in modifying the rules.
4. Monitoring: compliance with the rules is audited, and free riding is limited.
5. Graduated sanctions: compliance is enforced with appropriate sanctions.
6. Conflict resolution mechanisms: all parties have ready access to arenas to resolve conflicts.
7. Recognized rights to organize: the rights of locals to devise their own institutions are not challenged by external governmental authorities.
8. Nested units: appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested institutions.

¹Ostrom's specific focus was common property resource management; I have paraphrased her to address the more general collective action issues in my case studies.

4 Economic Development and Cultural Change

While principles 4 and 5 are less germane to the present cases, the other six are quite relevant and will serve to organize my institutional analysis later in this article.

I begin below with a profile of the communities, followed by a historical narrative of each oil field and the role of the local community. Then, I analyze the differences, focusing first on the key issue of property rights. I then consider questions of institutional effectiveness (per Cornell and Kalt) but leave aside questions of cultural congruence. Next, I consider the different evolutionary path of institutional development in the two cases, building on both Feeny and Ostrom. Finally, I discuss the two cases in terms of Ostrom's design principles. I conclude that effective local institutions are key to sustainable local development, with or without the good intentions of the oil companies.²

Community Profiles

The communities in the Villano area are mostly indigenous hamlets with no road access. The Quichua residents depend on slash-and-burn agriculture, hunting, and fishing for their subsistence. In 1992, following nearly 3 decades of political work by regional indigenous federations, these communities secured legal title to their lands. The land is inalienable, held in common, and managed in each community by a council and elected president.

Prior to oil development, with no access to market, there was no local cash economy and virtually no paid employment. Nor was there much community infrastructure. With no developed water source or system for disposing of human wastes, sanitary conditions were poor, and associated illnesses, such as parasites and gastrointestinal infections, were common. Fertility rates and infant mortality rates were both high: 6.4 children per woman in the fertile years and about 57.6 infant deaths per 1,000 live births. A survey conducted in 1997 for ARCO's Environmental Impact Statement showed that 52% of the population were under the age of 15, and 50% of the school-age population (6-19 years) were attending school (see table 2).

Nuiqsut is an Inupiat community of 490 residents. They have a mixed economy, with traditional hunting and fishing activities providing most of their food and serving as the cultural foundation of the community. Education, health, and utility services are provided by the North Slope Borough.

A 1998 census survey conducted by the North Slope Borough showed that 88% of the Nuiqsut labor force were currently employed, mostly by the government, the local village corporation, or in seasonal construction; the per capita income was \$39,180; 83% of households had running water; 16% had flush toilets; the ratio of children ages 0-15 to women ages 16-9 was 2.2; the proportion of the total population under age 15 was 36%; 99% of the school-age children were in school; 35% of adults had less than a high school education, while 23% had postsecondary education. The infant mortality rate was very low: 2.3 per 1,000 live births.

² It is beyond the reach of my information and analysis to compare profitability of the two fields as a partial explanation for the difference in the value of local benefits.

TABLE 2
SOCIOECONOMIC COMPARISON OF VILLANO AND NUIQSUT

	Villano	Nuiqsut
Per capita income (\$)	^a	39,180 ^b
Employment (%)	^a	88 ^c
Fertility ratio	6.4 ^d	2.2 ^e
Infant mortality (per 1,000 live births)	57.6 ^f	2.3 ^g
Population under age 15 (%)	52 ^h	36 ^e
School-age population in school (%)	50 ⁱ	99 ^e
Illiteracy	4-16 ^j	
Adult education attainment less than fifth grade (%)		12 ^k
Households with running water (%)	0	83 ^l
Households with toilets (%)	0	16 ^l

Source. Villano: EIA/PMA—Fases de Desarrollo Produccion, Transporte y Almacenamiento, ARCO Oriente, Inc., March, 1998; Nuiqsut: North Slope Borough, 1998-99 Economic Profile and Census Report, vol. 3.

^a Prior to oil and gas development, employment and income in the Villano area were negligible; there was no significant cash economy.

^b For 1993, before the Alpine project; in 1998, the year of construction, per capita income was \$48,359.

^c Percent of labor force employed in permanent, temporary, or part-time paid work during the survey week.

^d Average number of children per woman in the fertile years (15-49) in five communities of study area 1. The average number of children ranged from 3.9 in Santa Cecilia to 7.9 in Pandanuque.

^e Calculated from North Slope Borough census, 1998-99 data.

^f Infant mortality per 1,000 births for rural Pastaza Province (excludes town of Puyo), 1990.

^g Infant mortalities per 1,000 live births, all races, North Slope Borough, 1997-99; Alaska Bureau of Vital Statistics 1999 annual report, p. 68.

^h ENTRIX, Investigation de Campo, 1997.

ⁱ Percent of school-age population (6-19 years) in school in area 1, the roadless project area.

^j Self-reported illiteracy in the area of influence was less than 4%, well below the national illiteracy rate. The percentage of nonresponses to this question, however, was 12%. The EIA authors suggest that these nonresponses may be illiterates not acknowledging this condition, which would bring the rate up to the national average. Illiteracy in the remote indigenous villages would be much higher than for the study area as a whole.

^k Census 2000, summary file 4, PCT64. Sex by educational attainment for the population 25 years and over, Nuiqsut. All individuals with less than a fifth-grade education are over age 45.

^l North Slope Borough, 1998-99 Economic Profile and Census Report, vol. 3.

Oil Development at Villano

The innovative community relations program for the Villano oil field in eastern Ecuador has been hailed as an industry model for sensitive regions of the Third World. The ARCO program was successful in resolving hostilities, winning local community support for oil development, resolving day-to-day issues during construction, involving locals in environmental conservation, damping criticism by international nongovernmental organizations (NGOs), and completing the project on time and on budget.

In 1988, ARCO and its partner Agip secured oil and gas exploration and development rights in Block 10, a prospective area in the Ecuadorian Amazon. In 1992 ARCO announced discovery of an estimated 175-200 million barrels of reserves. Seven years later it began producing the oil under a 20-year service contract with Petroecuador. Agip assumed the operation in February 2000.

The first community relations challenge for ARCO arose in April 1989, when a delegation was involuntarily held for 12 days in the village of Sarayacu, ostensibly over issues of access for seismic studies and compensation for damages. The demands presented by the Organization of Indigenous Peoples of Pastaza (OPIP), however, raised broad issues of natural resource policy and indigenous relations with the Ecuadorian government. A second interruption occurred in 1991, when the community of Moretecocha stopped construction of an airstrip, seeking additional community assistance benefits. The responses by ARCO to these incidents set the pattern for a two-track process of engagement, one with the regional organizations and the other directly with the communities.

Negotiations with OPIP (which had been rallying international NGO support) culminated in a 1994 summit meeting in Plano, Texas. The Plano Agreement committed the parties to work together to develop an environmental assessment and management plan for Block 10 and to plan a fund for the sustainable development of the communities. To implement the agreement, they created the Environmental Technical Committee (ETC), composed of representatives of ARCO, Petroecuador, and three regional organizations: OPIP; the Association for Indigenous Development, Amazon Region (ASODIRA); and the Indigenous Federation of Peoples from Pastaza and the Amazon Region (FIPPRA, also known as AIEPRA, or the Association of Evangelical Indigenous Peoples of Pastaza).

Profound political differences among the three regional organizations very nearly sundered the working group from the outset. But each organization came around to decide that interests in working together outweighed the interests that divided them. Over the next 2.5 years the ETC members worked very collaboratively, building up a high level of mutual understanding and trust in the process. In the end they completed tasks related to the environmental assessment and the environmental management plan; they were unable to agree on and complete work on a sustainable development plan and funding formula.³ The ETC still functions in a more limited role in the operations phase, providing environmental monitoring and oversight.

³This part of the history and the lessons learned from it are elaborated in Mendez, Parnell, and Wasserstrom (1998).

Community Assistance

ARCO signed its first community assistance agreements in the exploration phase, with Moretecocha in 1990 and in 1993 with ASODIRA, representing the communities of Villano.⁴ This agreement was later extended to cover the other Block 10 communities represented by AIEPRA. In mid-1998 ARCO began negotiating a new round of community assistance agreements for the construction phase. This was interrupted by the sequester of company personnel in Villano for 10 days. The communities were not happy with ARCO's decision, or ASODIRA's acquiescence, not to build a road. Through meetings directly with the presidents of the base communities as well as ASODIRA, ARCO was able to negotiate a new agreement that was mutually satisfactory. To head off future problems, the participants called for monthly meetings to improve communication and to address day-to-day issues in relations between the company and the communities, especially during construction. This was the beginning of the Good Neighbors Forum.

The Good Neighbors Forum consists of monthly meetings of representatives of the base communities, ASODIRA, and AIEPRA, facilitated by the Community Relations Department of the operator—originally ARCO, now Agip. In addition to airing concerns and negotiating their resolution, the Good Neighbors Forum plans how to spend the annual community assistance funds provided by the operator. Guidelines for community assistance projects, and for the community relations program generally, are included in the community relations section of the Environmental Management Plan, issued in February 1998. Since 1997 the operator has spent more than \$500,000 per year on social programs, health, education, transportation, communication, and infrastructure for the communities in the operating area.

The Next Step: Sustainable Development

While indigenous communities in the Ecuadorian Amazon were initially opposed to oil development in their region, their positive experience with ARCO has changed their attitude. They now support oil development, provided that they are involved in the environmental management of the project and that they have sustainable benefits from the project. In particular, they are satisfied with the environmental mitigation that ARCO implemented, including a novel roadless technology, a pipeline right-of-way only 3.5 meters wide—half the width of the prior industry standard—remote operations of the well site, and a strict code of employee conduct. They are also pleased with the ongoing health, education, and transportation benefits they receive from ARCO and Agip. They are not happy, however, that they are now dependent on ARCO for these services; they would prefer to have investment in a sustainable development project or fund that will be ongoing long after the oil and the company are gone—a project or fund that they manage themselves. This is the new frontier in community relations where companies such as Shell, Burlington Resources (the successor to ARCO), and others are pioneering.

⁴ The initial agreement in 1991 was between ARCO and the communities of Villano, Santa Cecilia, and Pandanuque. The communities went on to organize as DICIP and then ASODIRA. This organization was recognized by ARCO in 1993, and subsequent extensions of the agreement eventually covered all 12 communities in Block 10 that affiliated with ASODIRA.

Oil Development at Alpine

The experience of the community of Nuiqsut with development of the Alpine oil field is quite different. As a result of the Alaska Native Claims Settlement Act of 1971, the community received fee simple title to 146,134 acres of land, plus \$3 million and a for-profit village corporation established to manage it. The community organized a city government in 1975. By the time oil was discovered in 1985, they had a decade of local self-government institutions and a generation of sophisticated political leadership forged through the decades of the land claims struggle (see table 3).

**TABLE 3
ALPINE TIMELINE**

Date	Event
1973	Nuiqsut village reestablished by 27 families moving from Barrow. Village ANCSA land claims certified in the Coleville River Delta. Additional claims still pending
1985	Texaco discovers oil in the Coleville Delta; following a lengthy dispute concerning a land swap with the state, ASRC reasserted mineral rights subsurface to Kuukpik Village Corporation lands
1987	Kuukpik and ASRC settle a dispute regarding the scope of Kuukpik's right to approve or veto any development on its land
1992	Nuiqsut negotiates a share of oil royalties from ASRC
1994	ARCO discovers commercial quantities of oil at Alpine. Advisory panel established by agreement with Kuukpik and ARCO
1994-96	Delineation wells, planning, and evaluation
1996	Discovery declared commercially viable; environmental evaluation document released
1997	Surface use agreement between ARCO and Kuukpik takes effect
December 1997-2000	Construction and development drilling
1999	Phillips acquires ARCO
November 2000	Start of production

Community Leverage Points to Manage the Terms of Development

While the village corporation, Kuukpik, Inc., owned the surface of the land, the subsurface mineral rights were owned by the regional Native corporation, Arctic Slope Regional Corporation (ASRC). A surface use lease agreement and a pipeline right-of-way had to be negotiated between ARCO and Kuukpik, as well as the terms of the oil and gas lease and the unit agreement with ASRC. Kuukpik also had unusual leverage over ASRC through section 1431(o) of the Alaska National Interest Lands Conservation Act (ANILCA).

Nuiqsut is located in the National Petroleum Reserve–Alaska (NPR). Under Alaska Native Claims Settlement Act (ANCSA), Kuukpik could claim surface lands in NPR, but ASRC was initially not allowed the subsurface rights. ANILCA section 1431(o) amended this to provide that if the federal government were to authorize commercial development in NPR, then ASRC would be allowed subsurface rights there. In 1985 ASRC secured the subsurface rights. Section 1431(o) of ANILCA also gave the village corporation veto power over development of the subsurface. In a 1992 settlement agreement with ASRC, Kuukpik traded on this right to gain a royalty share in the oil. To negotiate both this agreement and the surface use agreement with ARCO, Kuukpik was represented by high-end legal counsel with expertise in oil and gas agreements.

Surface Use Agreement

Kuukpik Corp. wanted, but did not get, more development in Nuiqsut, including a base camp, an air strip, and a permanent gravel road. In the surface use agreement between Kuukpik and ARCO, Nuiqsut did get 500,000 cubic feet of natural gas per year (North Slope Borough [NSB] is constructing the pipeline and gas-processing facilities), \$60,000 per year for a subsistence oversight panel, an oil spill response team, use of winter ice roads, full hunting and fishing access at the site, first preference for work to the Kuukpik Corporation and its eight joint ventures, good faith local hire for Nuiqsut residents, and matching funds for scholarships for industry job training.

Kuukpik also got \$1 million at closing, annual land rents, production payments, and a 1.25%–1.5% royalty share of the oil. Kuukpik will set up four "permanent" funds that pay dividends, scholarships, and elder assistance: Nuiqsut Constructors, a joint venture between Kuukpik and an ASRC subsidiary, performed all the civil work for Alpine, including opening the gravel mine, hauling gravel, and constructing the storage and production pads. Jobs for local residents were plentiful during construction, and a few local Nuiqsut residents have continuing employment in field operations. Three residents are currently in training for trades jobs.

The Kuukpik Subsistence Oversight Panel (KSOP) meets regularly in Nuiqsut to hear testimony from the company and contractor representatives and community residents concerning environmental and social impacts of industry facilities and activities. They negotiate with Phillips those changes in operations to mitigate problems that are identified. A subsistence representative referred by the community works at the well site on the Phillips payroll to monitor compliance with environmental stipulations and reports regularly to the KSOP. They hold the company to a high standard of performance. The city and tribal governments are working in concert with Kuukpik to protect community values in the face of development. They report that over several years, as they have become more organized and forceful, the company has become more respectful and responsive.

TABLE 4
LOCAL REVENUE SHARE IN ALPINE, 2001

Oil Revenue	Value
Well head production value (\$ millions)	570
Total government and owner take (\$ millions)	159*
Local share (\$ millions)	4.5 [†]
Percent	3.2

Source. For well head production value, Alaska Department of Revenue.

* Includes royalties (unrestricted = \$29 million, restricted = \$19 million, Native corps = \$20 million); state corporate income tax = \$20 million (estimate based on prorating volume); severance tax = \$54 million; property tax (\$16 million to North Slope Borough, \$1 million to state).

[†] Includes Kuukpik royalties = \$3.5 million, Kuukpik land rents = \$180,000, Nuiqsut per capita share of North Slope Borough taxes = \$735,000, support for Kuukpik Subsistence Oversight Panel = \$60,000.

Comparing Benefits

The Alpine field turned out to have greater production and gross revenues than the Villano field (see table 1). But this alone does not explain the disparities in local benefits. Table 4 shows the local community share of the oil revenues from the Alpine field in 2001—the first full year of production. The \$4.5 million in royalties, rents, prorated property taxes, and community assistance benefits is about 3.2% of the total government and resource owner take. Comparable figures are not available for Villano, but available information suggests that government take is a higher percentage of the total production value in Villano and that the local share is less than 1% of the government take.⁵

What Were the Factors That Drove the Different Outcomes?

The biggest difference between the two cases is property rights. In Ecuador, the subsurface mineral rights are owned by the national government. The surface users are indigenous villagers. Although they hold communal title and have local authority to regulate local use of the lands, they do not hold a full complement of legally enforceable rights associated with land and resources.⁶ The national government retains an overriding interest in the land, owns all nonrenewable resources, and decides questions of access. This is a classic externality problem: the local users of the land are not party to the economic decision making concerning oil development. The local users bear significant costs and few direct benefits from development.

⁵ On the government take, see Van Meurs (1997) and Johnston (2001); on the local share, see Pablo Ortiz (personal communication, April 2-3, 2001).

⁶ De Soto (1989, 2000) asserts that the underdevelopment of property rights in Latin America, specifically the difficulty in defining and documenting title to property, increases transaction costs and hampers capital formation and enterprise in the region.

There was no externality for Nuiqsut. The village corporation directors and shareholders are village residents and land users. The corporation had legally enforceable property rights that it could leverage for both a royalty share from ASRC and favorable terms in the surface use agreement with ARCO.

Just as important is the disparity in effective institutions for the exercise of power. Nuiqsut had high-power professional representation in negotiating these agreements and the assistance of the courts in adjudicating its dispute with ASRC. By contrast, the Villano communities had no legal or political mechanisms to defend their interests and lacked the knowledge and resources to effectively self-advocate vis-a-vis ARCO and Petroecuador.⁷ Only a few local leaders are literate in Spanish. They had no access to or resources for lawyers and consultants. The communities had no assistance from government or from NGOs. They were politically marginalized and had no representation in the national government. Under these circumstances, they were largely dependent on ARCO for information and training as well as for services.

The one exception was OPIP, which as a large, politically militant regional organization had more experienced leaders with international connections, wide access to information and communication channels, support from international NGOs, and some resources for their work. But their support in the communities eroded. Some say it was undermined by ARCO, which shifted the community relations focus away from the Environmental Technical Commission, of which OPIP was a member, to the Good Neighbors Forum, which delivered goods and services directly to the communities. It is also true that because OPIP leaders were not members of the local communities, served a larger regional constituency, and were known to spend money on computers and travel and things with which the local communities did not identify, their credibility in the communities was vulnerable.

The lack of effective institutions and services in the Villano communities also affected their time horizon. Prior to the services provided by ARCO, the communities had very little in the way of basic health, education, transportation, and communication services. The few services they had were supplied by missions in the region. They were very eager for the immediate services ARCO offered. It would have been difficult for them to hold out and bargain for future, long-term, sustainable benefits. The Villano communities and regional organizations had no mechanism in place to resolve their internal political disputes. Had they achieved a united front, ARCO would have been obliged to address their proposal for a sustainable development plan. As it was, they had no recourse to interpret and enforce implementation of the sustainable development plank of the Plano Agreement.

This issue of legitimate institutions for timely, collective decision making is developed further below under the subheading "collective choice arenas." My comparative analysis of the two cases in terms of Cornell and Kalt's factors is summarized in table 5.

⁷ Becker (1999) shows that strong property rights and effective local institutions are not necessarily sufficient to secure the benefits of the resource. The local decision makers must also have the information, incentive, and resources to enforce their property rights. The Comuna of Loma Alta in western Ecuador had land-tenure rights to 1,650 hectares of forest reserve and a history of making and enforcing their own rules for a variety of goods and service in their community. Yet until an outside nongovernmental organization provided the community with relevant data on the value of their forest to their local water supply, villagers lacked the motivation to constrain deforestation. And until external funds arrived for demarcating the reserve, training reserve guards and guides, the community made no substantial organization to control the invasion and clearing of their forest by neighboring cattle ranchers.

TABLE 5
INSTITUTIONAL FACTORS FOR ECONOMIC DEVELOPMENT

Institutional Factor	Villano	Nuiqsut
Sovereignty/property rights	Weak and poorly defined	Strong and well defined
Culturally legitimate institutions with the ability to reach binding decisions in a reasonable time	Village councils with limited powers	City, tribe, corporate, and regional governance all well-established and indigenous controlled
Separation of business management from political leadership	No business enterprise experience	Well-established with 25-years experience
Independent dispute resolution	None	Court system
Effective bureaucracy	Local leaders have limited literacy and experience and few resources for outside assistance; tensions with regional leadership	Experienced local leaders, paid staff, and resources to hire top talent as needed

Source: For institutional factor, Cornell and Kalt (2000).

The Development of Institutions

The local demands for institutions in these two cases have the identical motive: to capture a share of the rents from oil development. The key differences are on the supply side (see table 6). The Inupiat already had in place highly effective rent-capturing local institutions incubated 30 years prior, when the giant oil field at Prudhoe Bay was first discovered. The oil companies could not proceed to develop the resource without settling disputed land titles. The ANCSA defined the Inupiat surface and subsurface rights, established regional and local Native corporations to hold legal title, and endowed them with a cash settlement, launching them as major economic players. The Kuukpik Corporation was granted leverage by ANILCA over the resource owner, ASRC, which, with the assistance of the federal court system, they were able to parlay into a royalty share. In the course of these political developments, a whole generation of Inupiat leaders gained valuable political experience.

The institutional innovation represented by the settlement agreement with ASRC and the surface use agreement with ARCO was small relative to this institutional base. By contrast, the innovation required in Villano to forge a stable, multicomunity political front with clout was impossibly large. Not only did they start from a lower institutional base but they also had a larger, more dispersed, more heterogeneous population to deal with.

In the absence of well-defined property rights and the institutional means to effect them, the people of Villano resorted to extralegal means: they took direct action to detain personnel and disrupt construction work.⁸ They also received international political support through global NGOs with Internet communications. Specifically, the Abya Yala network, working in alliance with OPIP and the national Indian federation of Ecuador, disseminated action alerts, and a protester with a banner scaled the ARCO headquarters in Los Angeles, garnering national news coverage.

⁸ In 1998 Ecuador adopted a new constitution that requires that indigenous landholders be consulted and share in the benefits of resource development (art. 84), but these provisions have yet to be defined and instituted by statute.

TABLE 6
FACTORS OF SUPPLY FOR INSTITUTIONAL INNOVATION

Supply Factor	Villano	Nuiqsut
Constitutional order	Political vacuum allows for ad hoc innovation but without government recognition or support	Strong home rule provisions in Alaska Constitution
Institutional base	Village councils; required innovation to achieve effective coordination is large	Well-established and articulated, multilevel institutions for self-governance; required innovation is small
Skills, knowledge, leadership, and resources	Minimal; ETC and GNF depend on ARCO for skills, knowledge, and financing; regional organizations have some independent resources; local leadership is poorly educated and has limited experience	Well-endowed; politically sophisticated leadership with financial resources to hire expertise
Costs of design and implementation	Large innovation has large political hurdles; larger, more diverse population	Settlement agreement with ASRC, Surface Use Agreement with ARCO, and oversight institutions are small innovations, with small costs compared to benefits
Expected benefits to dominant players	ARCO benefits from GNF and weak ETC, but not strong local organization	Under the existing institutional arrangements, Kuukpik is the dominant player and the direct beneficiary

Source: For supply factor, Ostrom (1990), Feeny (1993).

Concurrent with this, evolving international standards concerning corporate social responsibility and sustainable development, expressed in documents such as the International Labour Organisation (ILO) Convention 169 and World Bank guidelines, fostered a more responsive corporate attitude. The resulting political pressure and economic threat to ARCO's interests, coupled with the personal desire of key employees to "do the right thing," motivated them to go into the field with an open agenda to negotiate a creative solution. Effectively, a credible extralegal threat motivated creative institution building to internalize the externalities. While it worked in this case, the transaction costs of direct action and ad hoc responses are high, and success may depend on leveraging outside forces.

From the company point of view, while the Alaska project environment has higher financial and regulatory hurdles for development compared to Ecuador, it also has less uncertainty. The company knew with whom it had to negotiate for Alpine, what its objectives were, and the rules of engagement. None of this was well defined for Villano. In Alaska, there was a symmetry of power such that ARCO could simply approach the negotiations as a business transaction. In Villano, because of the asymmetry of power, ARCO was obliged to take a more paternalistic approach and delve into areas of human services, organizational development, and leadership training that are beyond its corporate mission or expertise. While ARCO was willing to do this to a point, this alone is not sufficient to achieve sustainable local economic development.

Design Principles for Effective Self-Organized Institutions

While the collective action problem here is not the common property resource type of problem that Ostrom considered, it is similar. The central issue for the people of Villano—and Nuiqsut—was how to coordinate their actions to maximize their rents from ARCO and minimize the social and environmental costs of oil development. The dimensions of the problem are discussed below, using Ostrom's (1990) framework. Table 7 summarizes.

TABLE 7
DESIGN PRINCIPLES AND INSTITUTIONAL PERFORMANCE

Design Principle	Villano	Nuiqsut
Clear boundaries and memberships	Undefined	Well defined
Congruent rules	Developing ad hoc	Well established
Collective choice arenas	Developing ad hoc	Well established
Monitoring	OPIP—low accountability	High accountability
Graduated sanctions	None	Legal sanctions
Conflict resolution mechanisms	None	Court system
Recognized rights to organize	Minimal institutional support	Some institutional support
Nested units	AIEPRA, ASODIRA	City < borough < state Kuukpik < ASRC < AFN
Institutional performance	Weak	Robust

Source: For design principle, Ostrom (1990).

Clear boundaries and membership.—This was a difficult issue for Villano: Which communities should directly share in the allocation of community assistance benefits and benefit directly from the sustainable development program? All of Pastaza? All communities within 30 kilometers of the well site and pipeline in Block 10? What about the communities that were local to the exploration activities but not to the current operations? What about the (road-accessible) communities local to the central processing facility and sales oil pipeline outside of Block 10? Are communities the only units of membership, or do regional organizations have standing, too? In the end, ARCO made the unilateral decision to patronize only communities within 30 kilometers of the well site and pipeline.

For Nuiqsut, the rules of shareholder membership in Kuukpik and ASRC and the property rights of these corporations are well-established. There is only one local community involved, and the question of who is a resident is unambiguous. Though the city and tribe have no direct role as property owners, their status as stakeholder representatives, the rules defining membership, their scope of authority and jurisdiction, and their political relations with other players are all well established.

Congruent rules.—The Environmental and Technical Commission and the Good Neighbors Forum in Villano were developed ad hoc in an iterative process of actions, negotiations, and learning between company representatives, local residents, community leaders, and regional organization leaders. They were adaptive responses to address immediate problems, and in that sense were highly congruent with the applied context. The institutional forms adopted, however, while novel, were based in the cultural experience and institutional vocabulary of the company representatives; there was no precedent in the cultural experience of the local members. In this respect, they were not congruent with local cultural and social processes. Over time, however, as the local members become more experienced with these institutional forms, they may embrace them and adopt them as their own.

The corporate and city institutional forms authorized under federal and state law were proactively adopted by the indigenous people of Nuiqsut 25 years ago as tools for land claims and local self-determination. The traditional council is a recognized tribal government under federal law. The subsistence oversight panel was created under the Surface Use Agreement specifically to monitor and negotiate mitigation of environmental, subsistence, cultural, social, and economic impacts of oil and gas development. While these tools are sometimes frustratingly blunt instruments, they are nevertheless well-established, effectively wielded, and highly congruent tools for local control.⁹

Collective choice arenas.—In the absence of well-defined property rights and the institutional means to effect them, the people of Villano resorted to extralegal means: they took direct action to detain personnel and disrupt construction work. Negotiations to resolve the second sequester led to a 1994 summit meeting between ARCO executives and leaders of the three indigenous organizations—OPIP, AIEPRA, and ASODIRA. The resulting agreement included provisions for a sustainable development plan. Implementation of the agreement foundered on political dissension and rivalry between the three indigenous groups (see Mendez et al. 1998).¹⁰ With no recognized decision-making authority, and no established mechanism for joint decision making, dissenters were able to challenge and undermine the legitimacy of their rivals, resulting in a political impasse. Had they achieved a united front, ARCO would have been obliged to address their proposal for a sustainable development plan. As it was, ARCO could give up on the process intended to serve long-run community interests and focus on a short-term strategy serving corporate interests: buying peace in the field through immediate and tangible community assistance projects.

⁹ While they are well established and congruent now, 30 years ago, when they were first adopted, these institutional forms may have seemed alien.

¹⁰ I have followed Mendez et al. (1998) but note that there is no consensus. Three other key informants have given three different interpretations. One (from ARCO) pointed the finger at OPIP for failing to present a plan that met basic standards of accountability. Another (from Petroecuador) stated that the major problem was disagreement between ARCO and Petroecuador: Petroecuador wanted ARCO to assume responsibility for ongoing financial oversight of the program. A third (indigenous) informant asserted that they were powerless to overcome ARCO's objections and move the discussion forward. Accusations and misunderstandings abound. It is clear that there was a major breakdown in working relations between all the parties.

While there was a range of interests and opinions in Nuiqsut when the Surface Use Agreement was being negotiated, the authority for decision-making clearly rested with the Kuukpik Corporation. Once the decisions were made and the deal signed, the dissenters had to accept them and move on. There was an even greater divergence of opinion with respect to field design, with Kuukpik, the city, and the tribe advocating different proposals. The regulatory review processes provided public hearings in Nuiqsut where these differences were vigorously expressed. But the final permitting decisions rested at the borough and state levels, and decisions on field design were ultimately ARCO's. Local dissension or impasse could not thwart these decisions.

Nested Units and Conflict Resolution Mechanisms

The foregoing illustrates how the three levels of government—local, borough, and state—function to resolve differences and effect collective decisions in the Nuiqsut case. There is also a less formalized but functional hierarchy of political relations from Kuukpik to ASRC and to the Alaska Federation of Natives. When impasses do arise among these entities, the third branch of government, the court system, provides recourse. When Kuukpik and ASRC had a dispute about their respective decision authority and share of the rents from Alpine, they filed civil suit in the federal court. The framework of law and legal proceeding that this provided enabled them to negotiate an out-of-court settlement agreement and move forward with the development project.

In the Villano case, institutions of local government were weak to nonexistent. The function of the local village councils was primarily concerned with the allocation of communal land uses among member families. They had no legally recognized standing with respect to access for oil development. The provincial and national governments were effectively absent, with their scope of services reaching no further than the end of the road. Two of the regional indigenous organizations, ASODIRA and AIEPRA, were fledgling associations of community council presidents, with some support from local religious missions, but no institutionally recognized authority and no articulation with larger political entities in Ecuador. The third organization, OPIP, had a long history as a political advocacy organization for the larger region. While it had no institutionally recognized authority, it had established political relations with the national and provincial governments as well as some international NGOs. There were no established institutions for collective decision making across the communities of Villano or dispute resolution between them.

Recognized Rights to Organize

The Alaska Native Claims Settlement Act and state law governing corporations provided a strong foundation for organizing and recognizing the Kuukpik Corporation. The Alaska constitution provides for uniquely strong local government, granting home rule boroughs and municipalities authority to exercise "all legislative powers not prohibited by law or by charter." Inupiat leaders organized both the North Slope Borough and the City of Nuiqsut expressly for the purpose of asserting and exercising local control over development.

The political system in Ecuador concentrates governmental powers and resources at the national level. While the prior generation of indigenous rights activists achieved demarcation of lands and recognition of village councils as a first step toward protecting and managing indigenous lands, the land claims legislation did not establish broader rights to self-governance. Nor does the government recognize the ETC or Good Neighbors Forum (GNF), institutions ad hoc organized collaboratively by ARCO and local leaders.

Villano leaders want the government to provide a legal framework for corporate-community relations. As Hector Mayancha, president of ASODIRA said:

We have from the beginning helped the project. Despite this, for us it has been a difficult process for the simple reason that there was no established procedure for working, negotiating and cooperating, neither for the company nor for the indigenous people.

The best [system would be] between the indigenous people and the company, under a legal framework established by the government. Currently, we have the constitution which helps the indigenous peoples. Also, there exist other international conventions that help the indigenous peoples. But effective consultation and participation {are} not required in regulation.

The commitment we want is to work within a legal framework:: for example, that the Ministry of Energy and Mines and Petroecuador legally recognize the ETC through a ministerial accord or executive decree. Then there would be a legal framework for financing, capacity building, and other support. But at the level of the state, they don't even want to recognize the ETC. This is one of the great limitations. (Personal interview, January 24, 2001, Puyo, Ecuador)

Social Learning

Ostrom emphasized that institution building is an iterative process of social learning that takes time. The Villano leaders began their oil development negotiations with the experience of their neighbors to the north in mind. In Napo Province, oil development was an environmental and social disaster for the indigenous people. The Villano leaders initially emphasized environmental concerns and focused on the creation of the Environmental Technical Commission. They later felt that this concern was too narrow and shifted their focus toward social concerns (Haley 2002). Their immediate needs were addressed with education-, health-, and transportation-assistance projects under the institutional auspices of the Good Neighbors Forum. But their long-run demands for sustainable development were never satisfactorily addressed.¹¹

The community of Nuiqsut had firsthand experience with oil development in the Kuparuk field to the east. They too put a great deal of emphasis on protecting the environment through direct indigenous oversight of the environmental management of the project. But from the outset they were able to focus their negotiations on a strategy maximizing the long-run, sustainable benefits to the community. In part this was because the community of Nuiqsut already had a full range of basic services in place.

Another lesson for the Villano leaders was the importance of unity and being well organized to advance the long-term interests of the communities. Porfirio Mayancha, president of the council in Paparahua, said:

We have learned many things with the enterprise in our territory. In reality, one lesson is the environment, to continue preserving, conserving the ecology, flora, and fauna of the environment. In equal measure one of the best lessons is to continue fighting for the interest of the people of our community, not to be interested and fight for individual interests. This is a good lesson for me, to fight for the people, to get something for the people, because in reality where we live is different from the reality outside; we are all poor, we have the same needs, we are in the same situation of economic crisis and many things. My recommendation for other communities, other people, or other leaders, is to fight for something that will serve you, that is worth the effort afterwards. (Personal interview, January 24, 2001, Puyo, Ecuador)

¹¹ S. Sawyer (1998) suggests that they were bought off with "trinkets."

Frederico Inmunda, coordinator for Santa Cecilia, commented on the need for outside help:

For me, the most important advice for the people and communities is that we have a good legal advisor, someone that understands clearly, that explains to us, and orients us throughout With more skills, the indigenous communities can enter this dynamic arena. We have to know and respect the laws and rights we have and also see the world situation, to understand the oil project and its benefits.

We are also thinking very pointedly about observers, about who will evaluate [compliance]. We, as the beneficiaries making demands and complaining when they are unfulfilled, are not in a position to do this. [A nongovernmental organization] should be in the middle to see that all the commitments are fulfilled.

Through this long experience we have learned to be leaders and responsible directors with the capacity to confront the situation. By and large we fell in with their proposals, but we have learned to be persons directing things, not debilitated. For us it was a new experience, comparable to religion or Hispanic education. It was a large project, a state project; at times it was called a monster because it had so much money. This is what we had to confront.

Also we have learned, with all the conflicts, to be more conscious of the situation; not to betray the community; to defend and know plainly our rights and exercise them. If we had it to do over, to recoup what we have lost as a community, we would try to organize ourselves with one proposal to take up, a plan of sustainable development for the community. The recommendation I would give to other communities is to be organized and ask for good things that will endure life-long.

Each community has its own interests for what to do, its own vision, its own culture. What could have been done is to ask ourselves if these are interests of private individuals or groups, and leave these to one side; then unite ourselves as the communities of Block 10, and make a joint proposal for education, health, social programs, and capacity building. We want indigenous leaders—we need professional leaders—to begin to manage development programs for the community. (Personal interview, January 24, 2001, Puyo, Ecuador)

Learning goes on at the corporate, national, and international levels, too. The ARCO company invested in innovative community relations protocol because of its prior experience—and the prior experience of other international oil firms operating in lesser developed countries—with the costs of unmanaged conflict, adverse publicity, and political pressures. Complementing this is the evolution of industry best practice and international standards concerning social impact mitigation and community involvement. Major landmarks include the International Labour Organisation Convention 169, which recognizes the rights of indigenous peoples to participate in the management of natural resources in their territories, share in the benefits, and be compensated for damages, and World Bank guidelines for environmental evaluation and consultation. The new Ecuadorian constitution adopted in 1998 reflects both this evolution in international norms and the increased political power of indigenous groups in Ecuador. Article 84—which has yet to be defined and implemented by statute—requires that indigenous landholders be consulted and share in the benefits of resource development.

Conclusion

The contrast between these two case studies highlights the role of well-defined property rights for all affected parties, strong local institutions with unambiguous authority for collective decision making, mechanisms for adjudication of disputes, experienced political leadership, and the services of professional staff and counsel. These observations fit well within the analytic framework of the current literature: effective local institutions are critical. While good intentions on the part of the corporate player to foster sustainable local development in conjunction with resource extraction are laudable and valuable, they are neither sufficient nor strictly necessary.

The preexistence, that is, prior development of these institutions is largely governed by sociohistorical factors. They do not fall from the sky but are created incrementally in response to perceived need. Now that the Villano communities have a palpable need for these institutions, they are on the path to developing them, within the limitations of the larger institutional context. They may never achieve, however, the enviable position of Nuiqsut. First, institutional development is an iterative process of social learning and thus takes place over time. The prime opportunities for negotiating a share of the oil rents from the Villano field are largely past. Second, the Ecuadorian institutional environment, while moving forward to strengthen recognition of indigenous rights with respect to resource development, may never support the degree of sovereignty for the indigenous people of Villano that the Inupiat of Alaska enjoy. Nevertheless, perhaps the experience of the people of Villano, when shared, will help other indigenous communities craft effective local institutions capable of winning a larger and more sustainable local benefit from resource development.

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