

# ISER 2000-2002 Review

University of Alaska Anchorage • June 2002

Here we highlight some recent ISER research and describe Web sites ISER maintains. For complete information about all ISER's recent projects—and other work since 1961—call us or go to our Web site. ISER is part of the University of Alaska Anchorage and is Alaska's oldest public policy research center. The publications summarized here are available on ISER's main Web site.



Alaska's salmon industry is in trouble, with the value of the 2001 harvest at half the level it was a decade ago. Page 4 discusses why the industry faces such problems—and what kinds of changes might help it survive and prosper.

In the past 40 years, the federal government deeded 28 percent of Alaska lands to the state government and 12 percent to the Alaska Native corporations. It kept most of the rest. A sliver belongs to other owners. Pages 8 and 9 describe current land ownership in Alaska, looking especially at how individual owners got title to land.

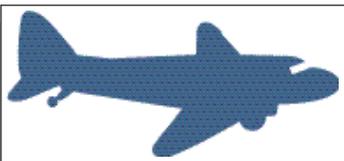


the rest. A sliver belongs to other owners. Pages 8 and 9 describe current land ownership in Alaska, looking especially at how individual owners got title to land.

The largest online collection of materials on Alaska Native culture, language, and history is at *Alaskool.org*, one of the program Web sites ISER maintains. Others include *Understanding Alaska*, a Web site for a new series of special economic studies, and a site for *Survey of Living Conditions in the Arctic*, an international survey of aboriginal Arctic peoples. See pages 11 and 12.

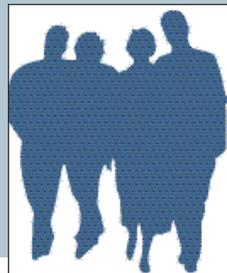


Tourism created more Alaska jobs than any other basic industry in the 1990s. Recent ISER studies assess how tourism has boosted the economy of Seward and increased recreation in the Chugach National Forest. Another study reports how visitor spending during the 2001 Special Olympics World Winter Games generated millions of dollars for Anchorage, the host city. See pages 6-8.

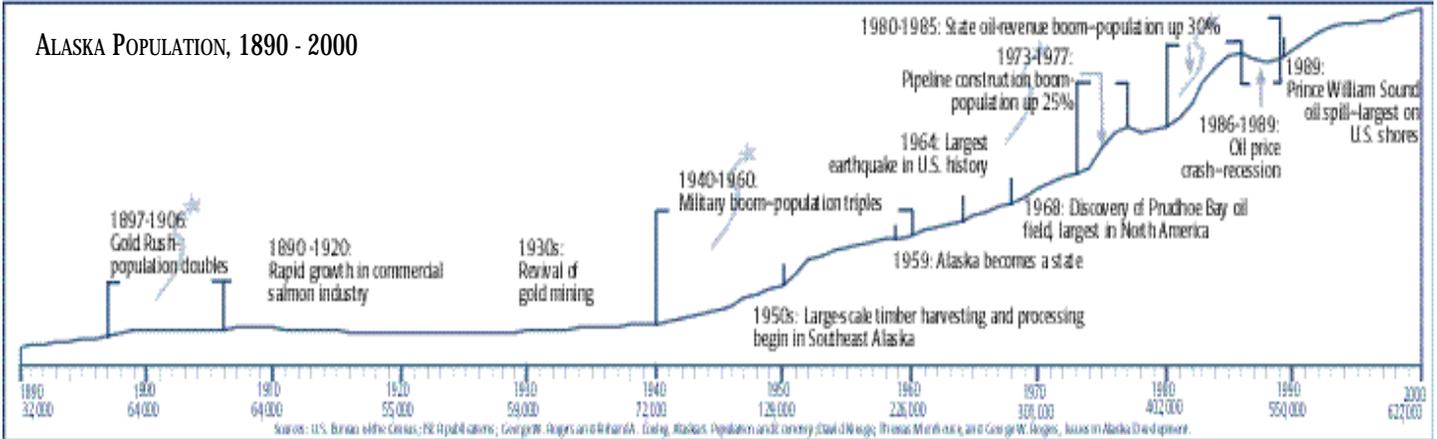


The fifth largest economy in Alaska would be the Ted Stevens Anchorage International Airport, if the airport were a separate community. Recent growth has been driven by international air cargo operations. See page 5. In another study involving the air industry, ISER is evaluating whether new aviation technology can reduce accidents in southwest Alaska (page 10).

Population and job growth will slow to around one percent a year in the coming decade, as Alaska's economy adjusts to smaller state oil revenues. The petroleum industry will be smaller but still very important, and several of Alaska's other basic industries—especially tourism, mining, and air cargo operations—will continue to add jobs. See pages 2 and 3.



## ALASKA POPULATION, 1890 - 2000



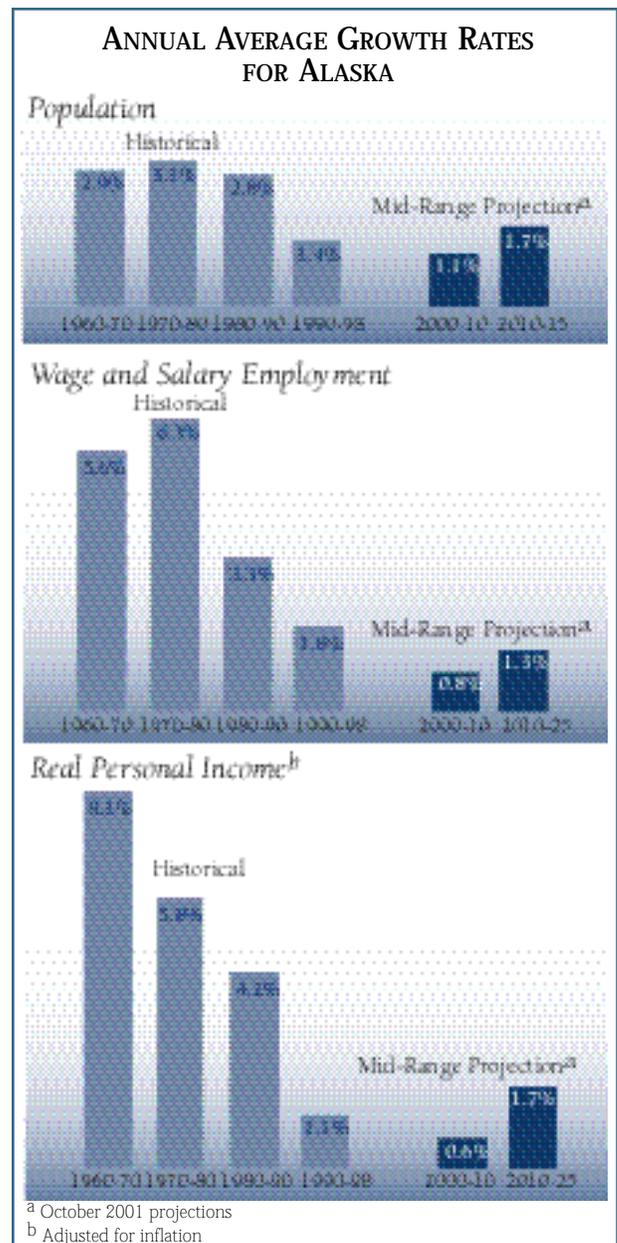
## GROWTH TO SLOW IN COMING DECADE

Source: *Economic Projections for Alaska and the Southern Railbelt, 2000-2025*. By Scott Goldsmith, October 2001. Prepared for Chugach Electric Association.

A military build-up during World War II sparked Alaska's first modern economic boom. Since then, Alaska has moved through several booms and busts related to North Slope oil development (see figure above). Alaska came out of every boom-bust cycle with more jobs and people than before.

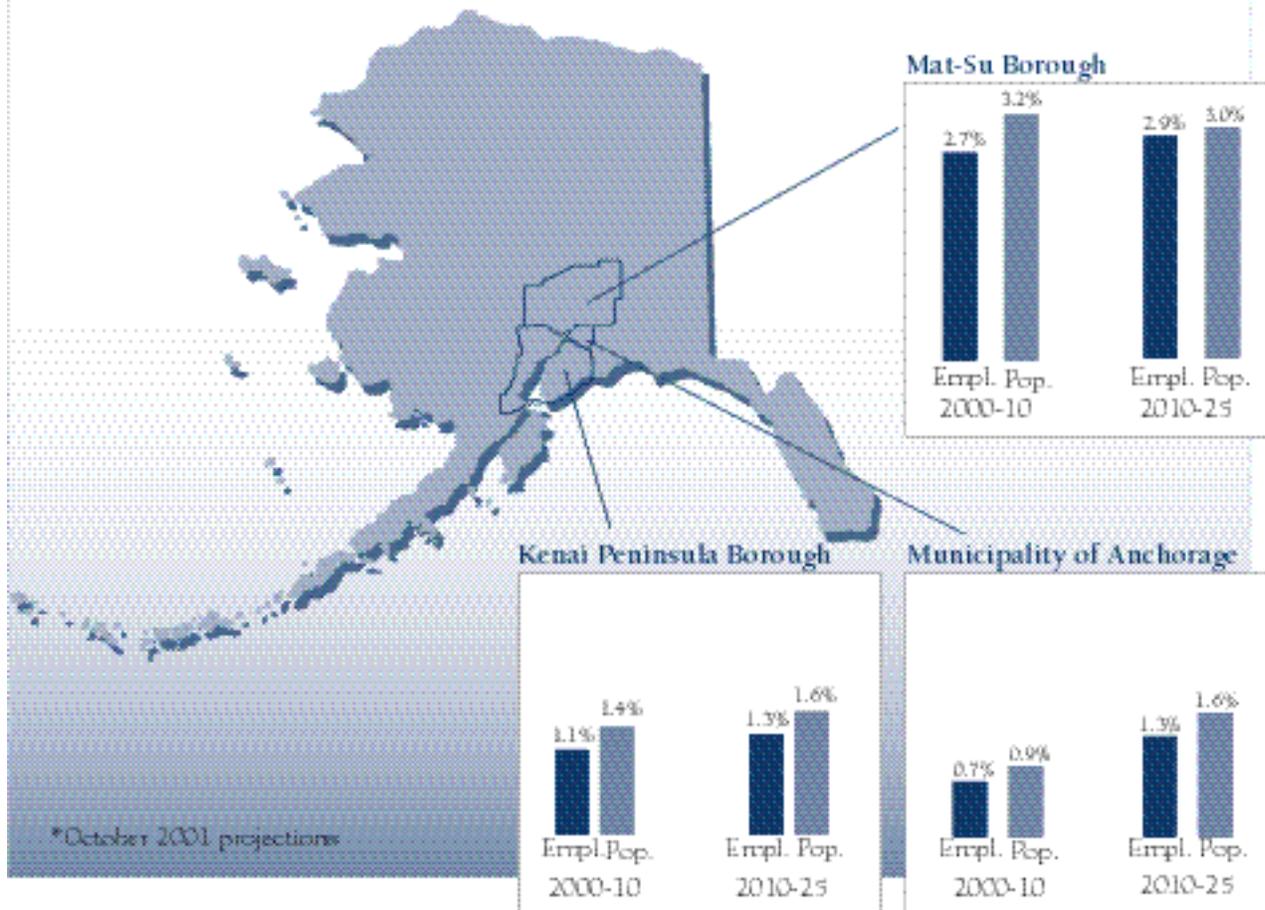
But growth slowed in the 1990s, as oil production and state oil revenues declined. What might the future hold? Here we present ISER's most recent mid-range economic projections. The full report (cited above) also includes low and high projections, based on different assumptions about factors that will influence growth. These projections are based on the best current information. But Alaska's past teaches us that surprises—for better or for worse—can quickly change the outlook.

- **Economic growth will slow in this decade, as Alaska adjusts to smaller oil revenues.** After 2010, growth will likely pick up somewhat. The petroleum, tourism, mining, and international air cargo industries will continue to generate jobs and help Alaska gradually overcome the decline in state oil revenues.
- **Population will likely grow around 1 percent annually through 2010 and then about 1.7 percent annually through 2025.** This is slightly faster than growth in jobs, because of two trends: residents are replacing nonresidents in some jobs, and Alaska's population is aging, shifting more Alaskans out of the work force.
- **Job growth will likely be less than 1 percent annually between now and 2010 and about 1.3 percent annually between 2010 and 2015.**
- **Real personal income (adjusted for inflation) will likely grow just over half a percent annually** between now and 2010 but pick up to about 1.7 percent a year after that. Incomes won't grow as fast as they have in the past because of



slower growth in employment, the continuing shift of more jobs to lower-wage industries, and slower growth in government payments to individuals.

**PROJECTED ANNUAL GROWTH RATES FOR ALASKA'S SOUTHERN RAILBELT  
(MID-RANGE PROJECTIONS)\***



The Alaska Railroad starts in Seward on the Kenai Peninsula and ends in Fairbanks. About 60 percent of Alaskans live along the southern part of this railbelt, which includes the Kenai Peninsula Borough, the Municipality of Anchorage, and the Mat-Su Borough. Past economic growth has been concentrated in these areas—and most future growth will be as well.

- **Economic growth in Anchorage will be close to the statewide average.** Anchorage makes up a big part of the state economy, and it also provides support services for much of Alaska—so developments anywhere in the state typically affect Anchorage. The city has three times more people and six times more jobs than it had in 1960. A big part of the growth in jobs was the addition of tens of thousands of trade and service jobs, as Anchorage replaced Seattle as the supply center for much of Alaska.

- **The Mat-Su Borough's population and employment are projected to grow at close to 3 percent annually in this decade.** The borough's economy is closely linked to Anchorage's, but because it is a much smaller economy, change is more pronounced there. People who live in the borough but commute to work in Anchorage or other job sites provide two-thirds of the borough's economic base. Over the years the Mat-Su Borough has captured an increasing share of jobs in the combined Anchorage and Mat-Su region, up from 2.5 percent in 1960 to nearly 8.5 percent by the end of the 1990s.
- **Job growth in the Kenai Peninsula Borough will likely average around 1.1 percent annually in the next decade** and slightly more after that. Petroleum production and processing, commercial fishing, and tourism provide the private-economy base for most of the jobs in the borough. The distance between Anchorage and the Kenai Peninsula is too far for daily commuting, but the borough does rely on Anchorage for many support services.

## ALASKA'S SALMON INDUSTRY FACES CHANGE

*Source: Presentations by Gunnar Knapp in 2001 and 2002, discussing challenges and strategies for the Alaska salmon industry.*

The Alaska salmon industry is in trouble, with the value to fishermen of the 2001 harvest less than half the average of a decade ago. Many things have contributed to that decline—not only competition from farmed salmon, but also a sharp decline in sockeye harvests, changes in consumer demand, and a world economic slowdown, among other things.

Gunnar Knapp is an ISER economist who has studied the salmon industry since the 1980s. Below we summarize points from presentations he has given recently, discussing challenges the industry faces and his thoughts on possible strategies for dealing with them. Dr. Knapp argues that trends we're already seeing are likely to continue in the future—and that to survive the industry must change.

### Why Worry?

- The salmon industry is hugely important to Alaska, employing tens of thousands of Alaskans who catch and process salmon and thousands more who provide transportation and other support services.
- Dozens of coastal communities rely heavily on salmon fishing for jobs, income, and taxes.
- The health of Alaska's entire seafood industry is linked to the health of the salmon fisheries—because many fishermen and processors depend partly on income from salmon to stay in business fishing for and processing other species.

### What if The Industry Doesn't Change?

- Prices will continue to trend down, although in the short term they may rise above recent lows caused by a glut of farmed salmon.
- Fishermen will lose markets. Fewer processors will operate, and they will increasingly limit what they buy.
- Values of boats and limited entry permits will drop.
- More fishermen will defer boat maintenance, default on loans, or go bankrupt.
- More fishermen will be injured or killed as they race for fish in boats that may be inadequately maintained.
- Fishing communities will lose not only fishing income but also other income fishing indirectly generates.

### Isn't There Any Good News?

- Some salmon fisheries are doing relatively better, because they have more favorable resource and market conditions and cost structures.
- Some fishermen and processors will always be able to survive tough times.
- As fishermen and processors leave fisheries where they can't make money, those who remain can become more efficient and profitable, because they will have more fish.

- High-end niche markets provide a growing opportunity for wild Alaska salmon. But selling to high-end markets requires consistent high quality—and the size of these markets is limited.

### Why Haven't We Done Anything So Far?

- The challenges to the salmon fisheries are complex—and individual fisheries face different problems. Many people inside and outside the industry don't fully understand the complexities. So it's hard for people to agree on which problems to solve and how to solve them.
- Fishermen and processors don't trust each other and don't communicate much.
- So far Alaskans have looked for strategies that don't require much change and that don't cause economic pain. We haven't thought about the fundamental but also disruptive changes that are necessary to build an industry that can compete in changing world markets and under changing resource conditions.
- State leaders haven't provided enough leadership, partly because the issues are so difficult and divisive.

### How Can We Survive and Prosper?

The current management system serves an important social purpose—it spreads the wealth from the salmon industry among thousands of individuals—essentially by requiring use of inefficient boats and gear and forcing fishermen to race for fish. That system worked as long as there was money enough to go around, but it isn't working anymore. We need a new management system that:

- Allows for continuous adaptation as natural and economic conditions and technologies change.
- Creates internal incentives for producing fish at the lowest possible cost and the highest possible quality.
- Encourages coordination of harvesting, processing, and marketing.

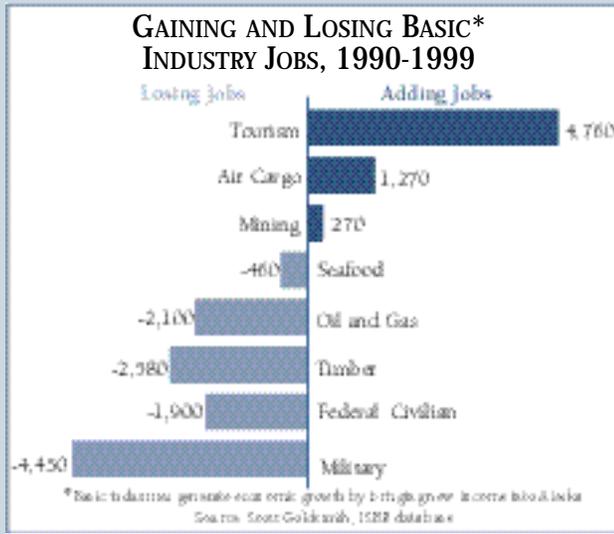
One possibility for a new system would be *allocation-based management*, under which:

- Individuals or groups would have designated shares—allocations—of the harvest, for a given area and time.
- Fishery managers would focus on achieving escapement goals while monitoring the allocated catch.
- Fishermen would be given as much flexibility as possible in how they harvested their shares of the catch.

### What Should We Do Right Now?

Alaskans have many different ideas about how we could accomplish the needed changes. Whatever we do, such changes will be difficult and will take time. But we need to start talking right now about where we want to go and how to get there.

In the 1990s, Alaska lost jobs in several basic industries—industries that generate growth by bringing new money into the economy. But the tourism, air cargo, and mining industries created jobs. On this page we look at the economic contribution of Anchorage's international airport, where much of the growth in the 1990s was due to growth in international air cargo operations. On pages 6 through 8 we report on three ISER studies that look at aspects of tourism in Alaska.



## AIRPORT CONTRIBUTES ONE IN TEN JOBS

Source: *Ted Stevens Anchorage International Airport: Economic Significance 2000*. By Scott Goldsmith, July 2001. Prepared for AIA.

If all the jobs and payroll that can be traced to Anchorage's airport were located in a separate town, that town would have the fifth largest economy in Alaska. Only the economies of Anchorage, Fairbanks, Juneau, and the Kenai Peninsula Borough would be bigger.

That's a finding of a 2001 ISER study of the economic contributions of the Ted Stevens Anchorage International Airport. Other findings include:

- *About 14,750 jobs and \$515 million in payroll were attributable to Anchorage's airport in 2000.* That includes jobs at the airport itself and additional jobs that airport activities generate in the community.
- *The airport directly or indirectly accounts for more than one in ten of all Anchorage's wage and salary jobs.*
- *The largest single source of airport-related jobs—and the source of most new airport jobs in recent years—is international air cargo operations.* International cargo operations at the airport doubled during the 1990s and accounted for more than a third of airport-related jobs by 2000.
- *Additional cargo flights through Anchorage created some of the new cargo-related jobs, but an increase in ground services—like sorting and shifting cargo between planes—also accounts for some of those jobs.*
- *Largely because of cargo operations, Anchorage's airport is about five times bigger than you'd expect in a community this size.* It ranked as the fifth largest cargo airport in the world in 2000 (measured by total cargo moving through the airport).
- *Another reason Anchorage's airport is bigger than airports in other medium-sized cities is that most travel between Anchorage and other states is by air.* So Anchorage residents—as well as most other Alaskans traveling to and from the state and non-residents arriving or leaving by air—all pass through the Anchorage airport.
- *The economic importance of Anchorage's airport goes beyond the jobs and payroll specifically tied to airport activities.* The airport links Alaskans and Alaskan businesses with each other and the world. Without the airport, a lot of economic activities wouldn't be feasible. We can't estimate the dollar value of the existence of the airport, but it is a major benefit to the entire state.

## JOBS AND PAYROLL RESULTING FROM ANCHORAGE'S INTERNATIONAL AIRPORT, 2000

### Sources of Jobs and Payroll

	Total	International Cargo	Anchorage Residents	Other Alaskans	Non-Alaskans	Airport Tenants
<b>Jobs</b>	<b>14,750</b>	<b>5,185</b>	<b>3,075</b>	<b>2,697</b>	<b>1,604</b>	<b>2,188</b>
At Airport	9,119	3,058	1,869	1,728	1,176	1,289
In Community	5,631	2,127	1,207	970	428	899
	(In \$ Millions)					
<b>Payroll</b>	<b>\$515</b>	<b>\$178</b>	<b>\$105</b>	<b>\$95</b>	<b>\$53</b>	<b>\$84</b>
At Airport	\$367	\$126	\$75	\$69	\$42	\$55
In Community	\$148	\$53	\$30	\$26	\$11	\$28

Source: ISER estimate, July 2001, including multiplier effect and effects of airline crew layovers

## SCENERY DRAWS TOURISTS TO FOREST

Source: *Recreation and Tourism in Southcentral Alaska: Prospects and Patterns*. By Steve Colt, Stephanie Martin, Jenna Mieren, and Martha Tomeo of ISER, in collaboration with Paul Twardock, Alaska Pacific University. April 2001. To be published as a technical report by the U.S. Forest Service, Pacific Northwest Laboratory.<sup>1</sup>

Half the current recreational use of the Chugach National Forest in southcentral Alaska consists of people in cars, buses, or cruise ships looking at scenery and wildlife as they go by. And while more adventuresome activities like whitewater rafting have grown rapidly in recent years, the forest's spectacular scenery is likely to remain its biggest recreational draw for the next decade.

These are among the findings of a recent ISER report (cited above) that examines trends in tourism and recreation in southcentral Alaska—particularly in the Chugach National Forest—from 1989 through 1998. It also assesses prospects for growth in the coming decade.

The Chugach National Forest covers 6 million acres in southcentral Alaska (see map). A large part of the forest is either inaccessible—including ice fields and mountain tops—or difficult to reach. But the part that is accessible is near population centers and tourist destinations.

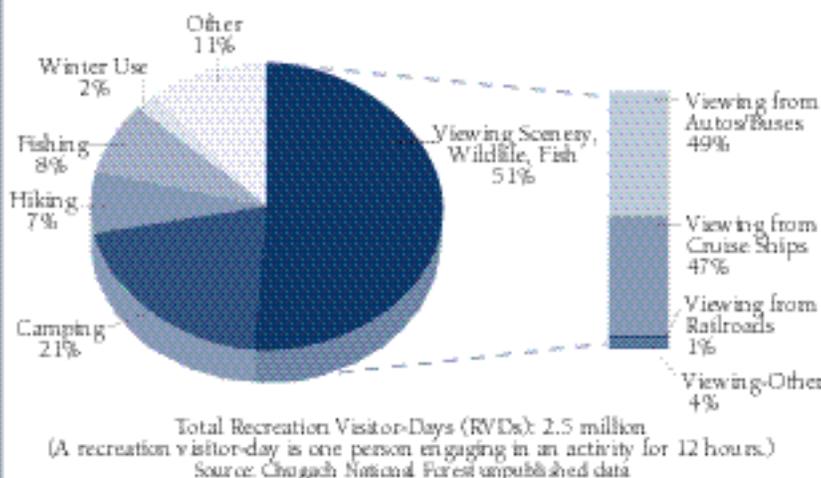
The forest parallels most—about 95 miles—of the highway linking Anchorage and Seward, the most heavily traveled highway in Alaska. It also includes much of the coastline and islands of Prince William Sound, which is popular with recreational boaters and with tour boat and cruise ship operators.

The Forest Service recorded about 2.5 million “recreation visitor-days”—defined as one person engaging in a given activity for 12 hours—in the national forest in 1998. Viewing wildlife and scenery is by far the most common recreational use, followed by camping, fishing, and hiking. People get access to the national forest most often by road, next by river, and third by trails. The ISER study reports:



- **Recreational use of the national forest grew rapidly in the early 1990s, with recreation visitor-days increasing more than 4 percent annually** from 1989 through 1995. Growth was especially fast among people looking at scenery and wildlife, with recreation visitor-days for that activity increasing close to 9 percent a year.
- **Overall growth in tourism and recreation had slowed sharply by the late 1990s**, with recreation visitor-days increasing less than 1 percent between 1997 and 1998.
- **Commercial “adventure” activities like whitewater rafting, guided kayaking, snowmachine tours, and helicopter skiing** grew rapidly in the national forest, even as growth in other activities slowed. Between 1994 and 1998, the number of guides and outfitters operating in the national forest nearly doubled and the number of clients increased 40 percent, from 13,000 to 19,000 per year.
- **Residents’ use of the national forest may have been about four times larger than visitors’ use in the 1990s.** But from available evidence—especially hunting and fishing licenses—it appears that non-resident use of the forest grew faster.

**TOURISM AND RECREATION  
IN THE CHUGACH NATIONAL FOREST, 1998**  
(Percentages of Recreation Visitor-Days)

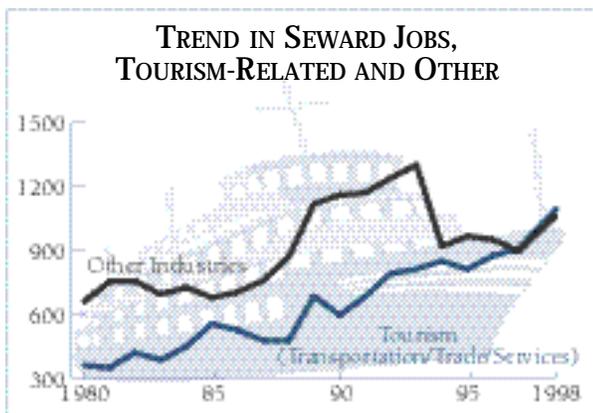


- **With increased resident and visitor traffic, the Seward Highway is more congested** now than it was 10 years ago—and a shortage of restrooms in the national forest along the highway has created sanitation problems.
- **Improved access to recreation areas without improvements in local infrastructure** has often left small communities in southcentral Alaska without adequate restrooms, sewage disposal, campgrounds, and parking.
- **Motorized recreation has clearly increased in southcentral Alaska in recent decades.** Residents who were asked about recreational activities in a 1979 survey did not even mention helicopter tours or helicopter skiing, and snowmachine use was lumped into an “off-road travel” category.<sup>2</sup>

- *The combination of increased recreation in the national forest and growth in motorized recreation* means that conflicts between specific recreational activities seem to have become more important than conflicts between recreation and other economic uses.
- *While still a small part of total recreation in the national forest—about 2 percent in 1998—winter use* of the forest and other recreation areas in southcentral Alaska seems to be growing rapidly, boosted by improved snowmachine technology and the introduction of guided snowmachine tours for beginners.
- *Mass-marketing outside Alaska often leads visitors to mistakenly believe that wildlife is always easy to see* and that all of Alaska is a wilderness without crowds, according to guides interviewed for this study.
- *Most observers see a period of moderate, steady growth ahead for recreation in the national forest*, with residents and visitors continuing to value the forest for its roadways, marine passages, and spectacular scenery.
- *The Chugach National Forest could accommodate more recreation of some kinds—particularly viewing of wildlife and scenery from boats and buses.* But because much of the forest is both difficult and expensive to reach, some on-the-ground activities near the road may already be close to their limits—as evidenced by existing conflicts among users.

## COASTAL PARK PROVES BOON FOR SEWARD

Source: ANILCA and the Seward Economy. By Scott Goldsmith and Stephanie Martin, January 2001. Prepared for National Audubon Society.



The Kenai Fjords National Park has been an economic boon for Seward, the gateway community for the park. This is the central finding of an ISER study (cited above) of the effects of the park on Seward's economy. The park, which extends from Resurrection Bay southwest along the gulf coast of the Kenai Peninsula, was created under the 1980 Alaska National Interest Lands Conservation Act.

Many Seward residents initially feared that the park would block development in their town, which had never fully recovered from the 1964 earthquake. That massive earthquake cost the town much of its economic base, when it destroyed the port, the railroad dock, fish processing plants, and much more. By the time Seward's port was rebuilt, most shipping that had previously gone through Seward had permanently shifted to the port of Anchorage.

Now, more than 20 years after Kenai Fjords National Park was established, public opinion has changed. Unlike in other areas of Alaska—where there are continuing disputes about the economic effects of the conservation units created in 1980—in Seward there is widespread agreement that the coastal park has helped the economy grow and diversify.

- *Driven by tourism, job growth in Seward averaged close to 4 percent annually* between 1980 and 1998.
- *Jobs in industries closely tied to tourism—transportation, trade, and services—grew nearly 6 percent annually.* By 1998, as the figure shows, jobs in those industries made up half of all Seward jobs, up from about a third in 1980.
- *Other changes also boosted tourism in Seward in the past two decades—including more sport fishing*, more cruise ship dockings, an improved Anchorage-Seward highway, and opening of attractions like the Alaska SeaLife Center. But the park is widely recognized as the biggest visitor draw.
- *Outside the visitor industry, opening of a state prison in Seward in 1988 also added jobs.* The seafood and timber industries, which have historically been important to Seward, grew in the 1980s but declined in the 1990s.

In general, although most Seward residents now think the park has been good for their economy, some are still concerned because so many of the jobs associated with the park are just seasonal. Also, if the number of visitors continues to grow, conflicts with other users could develop at some point.

## GAMES ADD MILLIONS TO ANCHORAGE ECONOMY

Source: Economic Impact of the 2001 Special Olympics World Winter Games Alaska. By Eric Larson, Scott Goldsmith, and others, June 2002. Prepared for Game Organizing Committee, World Winter Games Alaska

In March 2001, Alaska saw the biggest sporting event in its history, when 1,800 athletes and 8,000 visitors came to Anchorage for the Special Olympics World Winter Games.

About 4,500 people—including Alaskans and visitors—were volunteers at the games, and 8,500 Anchorage residents were at the events.



To assess the economic effects of the games on Anchorage's economy, ISER used a combination of interviews, financial information from the games' organizing committee, and previous studies. We interviewed a total of 362 visitors and local residents at the sporting events and mailed surveys to a sample of Anchorage businesses. Among the findings of the study (cited above) are:

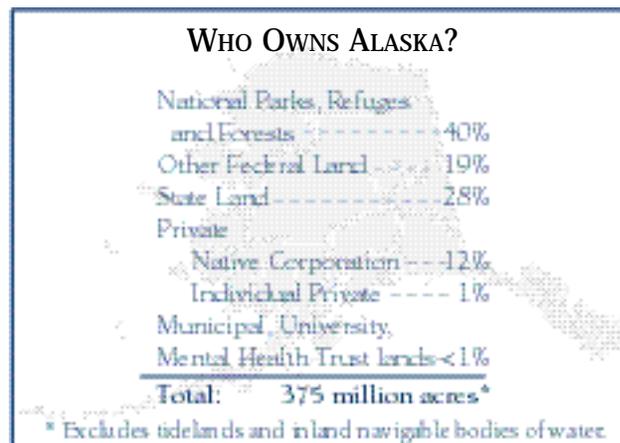
- **The games brought \$22 million in new money into the Anchorage economy.** That includes money the federal government spent to build and improve facilities before the games; money the games' organizing committee spent to prepare for and stage the games; and money visitors spent at local hotels and other businesses.
- **That spending generated \$12 million in Anchorage payroll** and a total impact of about \$32 million in sales.
- **The additional Anchorage payroll generated during the games represented the annual-average equivalent of nearly 400 jobs.** Most of those jobs were in visitor industries—like hotels and restaurants—but some were also in construction, communications, and other industries that don't ordinarily benefit from tourist spending.
- **Virtually all (98 percent) of Anchorage residents surveyed said the games improved the quality of life in Anchorage.** A third said the games had brought the community together; others cited international exposure, greater awareness of other cultures, and improved awareness of people with disabilities as non-economic benefits of the games.
- **New or improved facilities built for the games will benefit local residents, according to 84 percent of Anchorage residents** surveyed for this study. The federal government largely paid for building, road, and other improvements at Anchorage's Hilltop Ski Area and Kincaid Park.

## LAND TRANSFERS MOSTLY COMPLETE

Source: *Dividing Alaska, 1867-2000, in Alaska Review of Social and Economic Conditions.* By Teresa Hull and Linda Leask, November 2000.

For nearly a century after the U.S. bought Alaska in 1867, the federal government held on to almost all the 375 million acres in the territory. At the time Alaska became a state, in 1959, about three quarters of that land was unreserved federal land. The rest was largely in national parks and other conservation units and federal reserves. Just a sliver of land—roughly 1.5 million acres—was not federal-ly owned.

But when Alaska was admitted as the 49th state, the federal government began dividing up the vast public domain. An ISER publication, cited above, details changing Alaska land ownership and management between 1867 and 2000.



Three federal acts took much of the land that was unreserved before statehood: the 1958 Alaska Statehood Act, which gave the new state government rights to select 104 million acres; the 1971 Alaska Native Claims Settlement Act, which awarded Alaska Natives rights to select 44 million acres and established Native corporations to manage those lands; and the 1980 Alaska National Interest Lands Conservation Act, which added 104 million acres to national conservation units.

The state and the Alaska Native corporations both had about 85 percent of their federal land grants as of 2000. The table above shows land ownership when those transfers are complete. The massive land transfers have taken several decades, partly because of pitched battles—accompanied by temporary federal blocks on land selections—over who would get which lands. Alaska is huge, but lands suitable for settlement and development are limited—and they're often the same lands with important animals habitats or outstanding beauty.

## HOW HAS LAND IN ALASKA BECOME PRIVATE?

<b>ANCSA<sup>a</sup></b>	<b>44 million acres</b>
<b>Other Private</b>	<b>2.7 million acres</b>
Federal	
Land programs	1.66 million acres
Mining laws	140,000 acres
State land programs	750,000 acres
Municipal land sales	+140,000 <sup>b</sup> acres

**Total, excluding ANCSA Land: 2.7 million acres**  
**Total with ANCSA: 46.7 million acres**

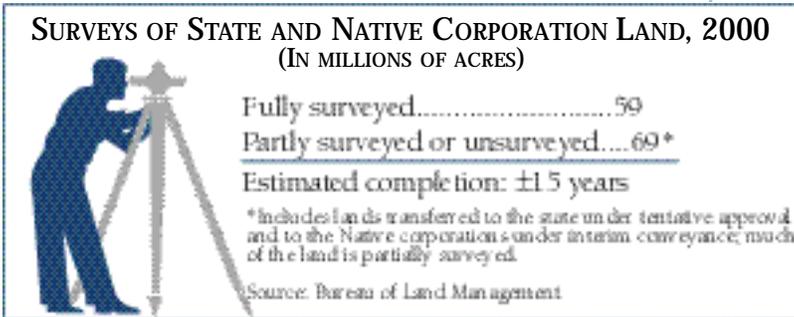
<sup>a</sup> Land awards under the Alaska Native Claims Settlement Act will ultimately total 44 million acres; as of 2000, about 37.5 million acres had been either patented or were under interim conveyance to Native organizations.

<sup>b</sup> Estimated based on largest municipal land sales.

Other delays have been caused by federal-state disagreements over which of Alaska's thousands of waterways are navigable; with some exceptions, the state gets title to submerged lands under navigable waters. Another issue is that lands can't be patented until they're surveyed. As of 1960, only an estimated one percent of lands in Alaska had been surveyed—and even in 2000, the Bureau of Land Management estimated that nearly 70 million acres of state and Native corporation land remained either unsurveyed or just partly surveyed (see figure.)

The largest of those programs were federal homesteading programs and the Native allotment program, under which individual Alaska Native could claim up to 160 acres if they could prove past use. The federal government is still processing some original allotment applications, and Congress approved a special application opening for Native veterans who missed the original filing deadline. So the amount of land owned by individual Alaska Natives will increase somewhat—but it's unclear how much—in the future.

Federal land disposal programs no longer exist, but the state government and some municipalities hold periodic land sales, which have so far put close to 1 million acres in private ownership. Continuing state and municipal land sales in the future will add to private ownership. Also, private owners have acquired title to an estimated 140,000 acres under federal mining law. Most Alaska land is now closed to new mining claims, but the federal government may still patent some existing claims.

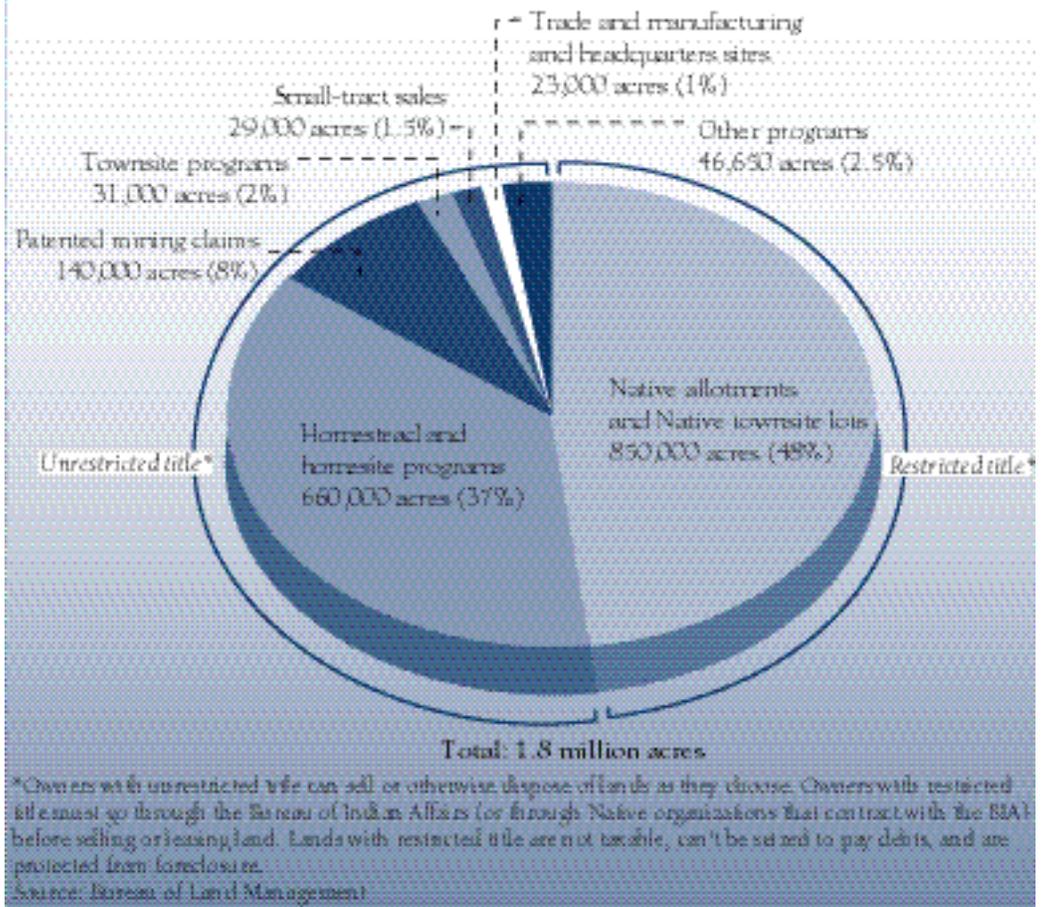


Still, despite some lingering disputes, the general location and extent of federal, state, and Native corporation lands in Alaska is well-documented. What is left is less than 2 percent of Alaska lands: around 2 million acres that the University of Alaska and municipalities own, and close to 3 million acres that are in private ownership, excluding Native corporation lands (which are also private). ISER's 2000 publication includes, for the first time, estimates of how much land has gone into private hands through specific public programs and policies other than the Alaska Native Claims Settlement Act.

As the table on the previous page shows, Alaska Native corporations are by far the biggest private land owners. Much of the other private land changed hands under various federal programs, all of which have been closed to new applications since the 1980s or earlier. (See pie chart.)

**FEDERAL CONVEYANCES TO PRIVATE OWNERS, 1867-2000**

(Under Federal Land Disposal Programs and Mining Law)

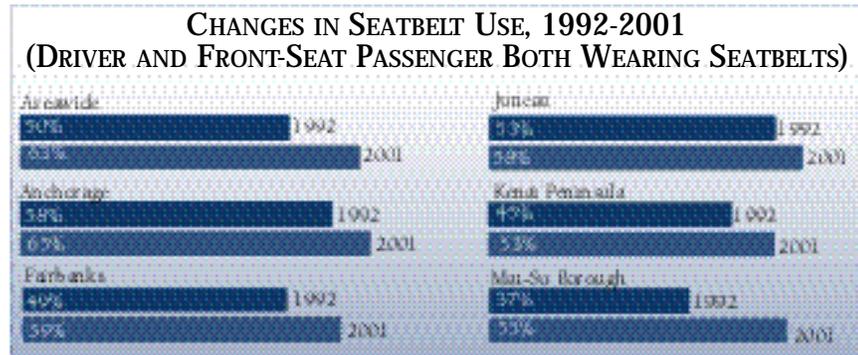


## MORE ALASKANS BUCKLE UP

Source: *An Assessment of Safety Belt Use in Alaska, Summer 2001.*  
By Virgene Hanna, October 2001. For Alaska Highway Safety Office.

More Alaskans are wearing seatbelts, with the share of drivers and front-seat passengers wearing seatbelts up from 50 percent in 1992 to 63 percent in 2001, according to a 2001 ISER survey in Alaska's most populated areas. Seatbelt use was up in all areas, especially the Mat-Su Borough.

Alaska law requires using seatbelts, but seatbelt use in the state is still considerably below the U.S. average, which stood at 77 percent in 2000. The Alaska Highway Safety Office reports that 62 percent of those killed in car and truck accidents in Alaska from 1994 through 2000 were not wearing seatbelts.<sup>3</sup>



## PILOTS SAY AVIONICS IMPROVES SAFETY

Source: *Alexandra Hill, Matthew Berman, and Stephanie Martin.*  
Preliminary results of Capstone program evaluation, June 2002.

Alaskans rely a lot on airplanes—but the state's vast size, rugged terrain, harsh winters, and sudden weather changes make flying risky. Also, because Alaska is so big and has so few people, much of the state lacks the aviation infrastructure and support services common in other states.

To improve aviation safety, the Federal Aviation Administration—in cooperation with industry—is testing new technology in southwest Alaska (see map). The FAA contracted with UAA (including ISER) to evaluate the benefits of the new program—known as Capstone—which involves:

- (1) Equipping commuter airlines and air taxis (usually carrying a maximum of 8 passengers) with avionics that shows pilots their location and information about nearby terrain, other aircraft, and weather.
- (2) Building ground stations that broadcast weather and flight information to planes with the new avionics and that air-traffic controllers can use for radar-like surveillance.
- (3) Installing new automated weather observation stations to provide current information in more locations.
- (4) Installing new instrument approaches at isolated airports, allowing planes to land in less favorable weather.

This technology is most likely to help prevent mid-air collisions and controlled-flight-into-terrain (CFIT) accidents—

which make up only a small part of total small-plane accidents in southwest Alaska, but which are the most likely to cause deaths. Aside from helping prevent accidents, the technology is designed to make it easier for pilots to fly—by making it easier to navigate, by providing more up-to-date weather information, and by making instrument landings possible when weather deteriorates. The FAA in mid-2002 was continuing to install the new avionics and build ground stations.

ISER's evaluation began in 1999 and will continue through 2005. We first analyzed historical data and found that if the new technology had been installed on all aircraft in the test region during the 1990s:

- *It might have helped pilots avoid about 1 in 7 of all accidents and nearly 1 in 2 fatal accidents.*

• *It might have helped prevent more than half of all accidents and fatalities, by mitigating some but not all causes of the accidents.*

ISER also surveyed pilots in early 2002 to ask about the effects of the new technology.

• *The program has made flying in the test area much safer, according to nearly half the 100 pilots ISER surveyed. Most of the rest said it had improved safety somewhat.*

- *Three pilots felt the program had made flying less safe, and five said it had made no difference.*

Also, recognizing the potential value of the program, operators who were reluctant to take part in 1999 and 2000 have now asked to be included. All small commercial operators based in or operating out of Bethel have agreed to participate.

It's too early to assess whether the program can prevent accidents. Planes with the new avionics have crashed, but only one accident was a type the new technology might have prevented—a controlled-flight-into-terrain (CFIT) accident. But evidence indicates that the pilot misused the avionics feature that might have helped him avoid the crash.<sup>4</sup>





[www.iser.uaa.alaska.edu](http://www.iser.uaa.alaska.edu)

This is ISER's central Web site ([www.iser.uaa.alaska.edu](http://www.iser.uaa.alaska.edu)). Here you'll find the latest research results, as well as most publications from recent years. The site includes a searchable list of more than 1,000 ISER publications since 1961. You'll also find profiles of ISER faculty and staff (including addresses for faculty Web sites) and links to special program Web sites, some of which are described here.



[www.alaskanconomy.uaa.alaska.edu](http://www.alaskanconomy.uaa.alaska.edu)

*Understanding Alaska* is a program of special economic studies, begun in 2001. Funded by the University of Alaska Foundation, the studies are intended to help Alaskans better understand their economy and to help find ways of strengthening it. We've started work, but we're still deciding the range of what we'll study and how. Broadly speaking, we plan to look at Alaska's unique economic structure, the rural economy, the seafood and other resource industries, the role of the Permanent Fund, and more.



[kidscount.alaska.edu](http://kidscount.alaska.edu)

*Kids Count Alaska* ([kidscount.alaska.edu](http://kidscount.alaska.edu)) is one of 50 state programs sponsored by the Annie E. Casey Foundation under its national Kids Count program. The program collects, distributes, and publicizes information about the well-being of children. Each year since 1996 ISER has published a data book reporting on the health, economic-well being, and safety of Alaskan children statewide and by region. All those data books, as well as links to the national program and data books, contact information, and more are on the Web site for *Kids Count Alaska*.



[www.alaskool.org](http://www.alaskool.org)

Alaska Native educators, communities, and ISER have worked together since 1997 to create *Alaskool.org*, the Internet's largest repository of information about Alaska Native history, education, languages, and cultures.

Developed with funding from the U.S. Department of Education, the site was originally intended to provide curricula and other study materials about Alaska Natives for use in Alaska's schools. Many teachers had long maintained that they were unable to include Alaska Native history in their classes because they lacked the necessary materials.

The site is invaluable for teachers—but with the rapid expansion of the Internet in the past few years, it has become a much broader resource, readily accessible, for anyone interested in learning about Alaska's Native peoples. And it has given Alaska Native students, teachers, and others in remote villages equal access to this wealth of information.

*Alaskool.org* has won praise from the Alaska Native community, teachers and students around Alaska, and Web users from other states and countries. Among the features of the site are:

- Dictionaries, phrasebooks, and literature in Inupiat, Yup'ik, Aleut, Tlingit, and Deg Xinag (Athabascan) languages.
- The first freely available, downloadable Alaska Native language fonts, created by the Alaskool team.
- A curriculum, written by an Alaska Native teacher, focused on the history, environment, and culture of the Cup'ik people in southwest Alaska. That curriculum serves as a model for other Native communities developing their own local curricula.
- More than 5,000 documents, photographs, video files, and other artifacts representing all aspects of Alaska Native history and culture, including Alaska Natives in the military; the Alaska Native Claims Settlement Act; notable Native people; Native government; and traditional life. Many of these items were in danger of being lost or forgotten before the Alaskool team found, digitized, and uploaded them.
- Streaming audio and video files that allow users to see and hear Native language pronunciation, traditional stories of Elders, and much more.
- Tools for teachers, including a curriculum planning guide, a detailed timeline of Alaska Native history, information on Alaska Native languages, and links to Native curricula.

## SURVEY OF LIVING CONDITIONS IN THE ARCTIC

In cooperation with Alaska Native organizations, ISER is carrying out one part of an international survey to determine and compare living conditions among indigenous people around the Arctic. Surveys are in different stages in Greenland, Canada, Norway, Sweden, Finland, Denmark, and Russia.

In 2002, ISER surveyed Alaska Native households in five villages in northwest Alaska, as well as in Kotzebue, the regional center. In early 2003, we will survey households in the Bering Straits and North Slope regions. A comprehensive report on the survey results from all participating countries is tentatively planned for late 2003 or early 2004, depending on when all surveys are completed and analyzed.

The project Web site ([www.arcticlivingconditions.org](http://www.arcticlivingconditions.org)) provides background about the project and information about the progress of surveys in various countries.

### ENDNOTES

1. This report will be available on ISER's Web site when the Forest Service publishes it.
2. The 1979 Alaska Public Survey was an interagency research project of the U.S. Forest Service, the National Park Service, the Bureau of Land Management, and the Alaska Department of Natural Resources. ISER directed the survey interviews.
3. Alaska Highway Safety Office, *Alaska Seatbelt Use Fact Sheet*, 2001.
4. National Transportation Safety Board, Final Report No. ANC01LA046.



## SUSTAINABILITY OF ARCTIC COMMUNITIES

Since 1995, ISER has been part of a study team examining how forces of change—especially changes in climate, oil development, tourism, and the level of government spending—could affect Arctic communities in the future and how communities might try to influence those changes. A big concern among local people is how change could affect the Porcupine caribou herd, a major source of food for indigenous people in both northeast Alaska and the northern Yukon in Canada.

The project is funded primarily by the National Science Foundation. The study team includes representatives of several universities and government agencies in Alaska and Canada, as well as indigenous peoples' organizations in both the Alaskan and Canadian Arctic.

Products of the first phase of the project are available on the Web site ([www.taiga.net/sustain/](http://www.taiga.net/sustain/)). The most popular feature on the site is the Possible Futures Model, which allows users to select scenarios of possible future community change, see the results, read researchers' explanations of the results, and see comments from local residents.

The second phase of the project is underway, looking at effects of change on whales—another important subsistence food—and creating a regional-level model to augment the existing community-level model.

### Research Summary (No. 61)

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