

## 8

## Social Impact Assessment

Of all of the sectors of policy research, social impact assessment (SIA) requires the greatest range of information. It is usually the most challenging sector because it demands prediction of future events based on understanding complicated current and future social processes and can make considerable use of anthropological knowledge. Yet rarely does the anthropologist work alone in this field—research teams are almost always multidisciplinary.

Social impact assessment can cover many different types of projects. For example, the impacts of large hydroelectric and irrigation developments that dam and divert waters have frequently been examined by anthropologists. Channel diversions, oil drilling, refineries, pipelines, highways, pulp mills, chemical and nuclear waste disposal facilities, and the construction of company or government towns are other types of proposals that have called for SIA.

Such projects can cost hundreds of millions, even billions, of dollars. When they are proposed, they are expected to eventually generate significant benefits. Much is at stake and usually many interests are involved, including some in the profit-making sector and those of politicians who can increase tax revenues or create jobs.

Such projects are usually proposed within an ideology of “development.” By transforming natural, renewable, and nonrenewable resources into products that humans can use directly or in manufacturing, the actions are viewed as benefiting the economy and society as a whole. A nation’s or region’s wealth increases, providing jobs, consumer power, and income to individuals, thus increasing prosperity. This, in turn, improves other aspects of an economic infrastructure because of many spinoffs of service in transportation, communication, and retail activities.

Since the 1960s, there have been countervailing concerns about the environmental impacts of development and fears that the ultimate costs and damage to the environment may be greater than any short-term economic benefits. Spurred on by environmental lobbying, federal, state, and provincial laws now require the assessment of nonmonetary costs of damage to the environment. Another concern has been that there could be serious negative social and socioeconomic tremors from rapid development. Anthropologists, as well as other concerned observers, have demonstrated that, in many cases, so-called “development” has been a formula for social disaster (see Bodley 1998). Instead of prospering and benefiting from “modernizing,” many people became its victims. The freedom, self-reliance, and core meaning to life that came from subsistence through local agriculture or hunting and gathering can

all be destroyed. People then become subject to the vagaries of the market for their livelihood. Those who are unable to maintain adequate full-time employment become more impoverished and subject to the control of outsiders. There may be declines in health and nutrition. Families and communities may suffer more intragroup violence, and drug and alcohol abuse may result, along with the loss of traditional conflict controls. Relocations or intrusions upon the landscape violate people's identities and important spiritual connections. Adding to social disasters, the impact upon the physical environment frequently reduces such people's well-being through habitat destructions, pollution, overpopulation, soil degradation, and loss of traditional food sources.

Recognizing such possibilities, environmental laws often require that social impacts be measured as well as environmental and economic ones. Accordingly, anthropologists are frequently hired by government monitoring agencies or third-party consulting firms to anticipate impacts on communities close to the proposed developments. Our colleagues in public archaeology have developed parallel niches in archaeology and cultural resource management as they assess the impact of construction on local heritage in prehistoric and historic villages, forts, gravesites, and battlefields.

A comprehensive impact study usually contains component projects, including those of economists, human geographers, town planners, sociologists, public health officials, wildlife biologists, soil scientists, engineers, and others as well as anthropologists and archaeologists. Systems analysts, working through government agencies or consulting firms, usually develop the final syntheses and interpretations of the component studies. Final decisions as to whether to proceed and at what level of development are made by senior government officials.

This chapter will outline the major stages of SIA, issues of public consultation versus technical expertise, and the role of ethnography and cultural ecology in impact studies. I will begin with a case study that illustrates some very wide-ranging, deep, and largely negative impacts of relocation on Northern Canadian Inuit and Dene peoples and the often unanticipated and severely disruptive dimensions of planned change. Avoiding or minimizing such damage is the main reason for SIA.

## Case Study: The Construction of a "Science" Town in the Canadian Arctic

### Background: Impetus for Development

The Mackenzie Delta is a zone of several thousand square miles in the western Arctic near the Alaska and Yukon borders. Its principal river, the Mackenzie, enters the Arctic Ocean at the Beaufort Sea (Ervin 1968, 1969). Traditionally, Dene, Inuit, and Métis peoples had lived largely off the land and engaged in a dual economy based on traditional subsistence as well as cash and credit from fur trapping.

After World War II, the Canadian government began to pay much more attention to its northern territories. The discovery of important oil and gas and mineral reserves made the area potentially attractive for economic development. Also, pressure was put on the Canadian government to fulfill humanitarian responsibilities of health, education, and social well-

being for indigenous peoples. Policy makers felt that it was important to prepare northern Native people for modernity through schooling and more exposure to wage-labor opportunities. Yet planning for northern development was centralized with top-down decision-making, making it a form of internal colonialism.

During the 1950s, a major stage in regional development was the construction of a large-scale "science town" that was to bring to the Arctic the material standards of living of southern Canada. It was to provide a centralized commercial and service center with a large hospital and a residential school to serve Native people over a vast region. The hospital was to contain all the facilities of an urban hospital, thus eliminating the necessity for medical evacuations to southern Canada. Government facilities for the region were to be expanded and centralized. Oil companies, commercial airlines, hotels, restaurants, stores, and construction companies were encouraged to establish there. The town was to be linked to southern Canada and the rest of the world through modern transportation and communication.

The whole plan was formulated by bureaucrats in Ottawa, and the site was chosen on engineering rather than social criteria and without consulting local residents. Then for several years Native northerners and transient workers from the south constructed the new town of Inuvik. By the late 1950s and early 1960s, the construction was more or less complete, and many people abandoned their trap lines and moved there.

### Impacts

The impact upon the people of the Mackenzie Delta was profound. The vast majority of them lived permanently in settlements. Of the approximately 5,000 people (including Euro-Canadians) living in the region by the mid-1960s, only about 150 lived off the land. Although there were four other villages, the region was dominated by the brand-new town of Inuvik, which contained over half of the region's population.

Over half of the population of Inuvik consisted of what locals called "southerners," transient workers from southern Canada. A large proportion of them were white-collar workers or professionals associated with the new infrastructure of modernization such as doctors, nurses, teachers, social workers, police, administrators and bureaucrats of various sorts, and military personnel.

Federal facilities, institutions, and buildings dominated the town. Inuvik also had a much larger commercial district than other settlements. The Hudson's Bay Company combined the functions of supermarket and department store. Hotels, restaurants, laundries, a movie theater, and a radio station were built.

All of the transplanted facilities and institutions as well as the homes of the newcomers were located in the "serviced" part of town, built at great public expense to meet the high standards of living. Compensated for high costs of living, the newcomers received generous northern "isolation allowances" and subsidized housing in the form of modern furnished apartments or bungalows. The vast majority of southerners were transient—intending to stay only for a few years and return home after their teaching or nursing contracts were over. Many came directly from Ottawa, the federal capital, were transferred north for bureaucratic reasons, and looked upon their Inuvik sojourn as a rung on the ladder of career advancement. Although transient, the southerners and their institutions came to dominate and define the overall culture of Inuvik.

Native people became marginalized in their homeland. Because the main construction phases were now completed, only about one-quarter of Inuit, Dene, and Métis household heads held permanent jobs in the late 1960s. The vast majority of skilled blue-collar jobs, such as electricians, plumbers, mechanics, and carpenters, were held by southerners, who had the necessary union and craftsmen credentials. Women fared slightly better, because there were not as many southerner competitors for such positions as laundresses, waitresses, teachers, nurse's aides, and cleaning ladies.

This grim economic situation took a heavy toll on family structures. Although three-quarters of the families were two-parent households, 25 percent were mother-headed households, sometimes with three generations supported through jobs, social assistance, and the federal Children's Allowance Program. Such a structure had been virtually unheard of in the fur-trapping or Aboriginal eras. Also new were households of young, single women and their children, who, in the past, would have been incorporated and supported within extended households. Male-headed households tended to be quite large, frequently containing ten or more people in very crowded conditions, often permanently on social assistance. A great deal of stress was placed on the men because of their low incomes, the high costs of Arctic town life, their large families, and pressures from extended kin to share meager resources.

All but two of the northerner households resided in the "unserved" end of town, which lacked modern water, heating, and sewage facilities. Water was picked up by buckets, and sewage was disposed at stations scattered throughout this district. The most common type of house was a temporary construction shack of 512 square feet. When the construction phase was over, it was discovered that there had been a miscalculation, and only permanent public servants, or those able to pay the exorbitant rent, were able to receive serviced housing. Underemployed northerners of Métis, Dene, and Inuit ancestry as well as a few white former trappers and their families had to live in the impoverished and overcrowded unserved zone.

Economically and socially, the southern Canadian style of life almost completely overwhelmed Native northerners, placing them in disadvantaged positions. Politically, administrators of the federal public service controlled the settlement and its hinterland. At that time, Inuvik had a colonial style of government with an elected "advisory" council, similar to a municipal council but without the power to initiate by-laws.

Southern bureaucrats and their families in the serviced end of town rarely interacted with Native northerners. Instead, tension and muted hostilities emerged between the two groups. As a reflection of this distance, the approximately 1,500 southern transients had formed forty-eight clubs and organizations to organize their leisure and voluntary activities during the very long winters. Only one had emerged among Native northerners, a fledgling social and recreational club.

Schooling presented severe challenges for northerner children and youth. The curriculum was designed on a format suitable for urban North America. Although schooling was compulsory until the age of sixteen, there were many failures and the dropout rates were very high. The alienation of youth was further expressed by the increasing numbers of petty crimes and assaults, crimes that had not existed in nontown settings.

Psychological alienation was associated with circumstances that set some people apart from others, giving them a marginalized status. Young, unmarried Native women, especially those who had children through liaisons with white transients, were stigmatized and sepa-

rated from their extended families and the general community. Northerners who had spent long periods in residential high schools and gained more skills for town living were considered "too white" in their values and behavior. People from the bush or smaller settlements, who from time to time tried to make commitments to the town, were sometimes viewed as freeloaders if they overstayed their welcome without making contributions. Others who had chosen a middle-class nuclear-family life-style were considered snobs and not really "Native" anymore. Conflicts were emerging between men and women because women had more possibilities for a steady income. Men's employment and capacities to support their families were jeopardized by the new economy.

Conflicts and stress became magnified. Traditionally, male household heads were independent, self-reliant trappers who took pride in their hard work and the support that they provided their families. Now few meaningful jobs were available to them, and they were directly under the control of outside southern transients. They could not return to their trap lines because they had abandoned their equipment, and any new ventures would be very expensive and open to failure in an uncertain fur market. Furthermore, their wives and children wanted to stay in the town. Finally, Native northerners had never lived so close together and in such large numbers. This alone led to much more conflict and tension, reinforcing the frustrations from all of the other problems.

Associated with these stresses were high rates of alcohol consumption. Inuvik had the highest rates of alcohol consumption in the whole country as measured through liquor store purchases and sales through the bars. Over 90 percent of arrests for offenses such as petty theft, assault, and wife-battering were associated with alcohol consumption. Now, many Natives felt a deep sense of stress, anxiety, anger, and frustration with their present predicament.

What went so wrong? There had been a pervasive faith in the positive effects of modernization and economic development, but this mega-project, the building of a new town and the relocation of a whole community, was done primarily for engineering and economic reasons rather than being based on carefully thought-out human needs or consequences. There was virtually no consultation with the people to be most affected, and the decision makers were distant, both geographically and culturally. Decisions were based on the convenience of those who were going to administer the new services. New infrastructure and services were intended to benefit the oil and gas industry, which has still not made a significant contribution to the regional economy. Economic planning was to allow Native northerners to abandon a trapping life-style and enter into a supposedly more secure and prosperous wage labor. Yet nobody actually made sure that there would be an adequate number of jobs available for these people. Nobody sorted out the complex inter-relationships among variables of family structure, cultural values, economics, education, the introduction of large numbers of outsiders, and other dimensions upon the populations indigenous to the area. No one attempted to consult and plan the transitions using the local people's ideas. For instance, the site chosen was in an area largely devoid of fish and game. Many of these former trappers in Inuvik suggested that their adjustment to this new life would have been much more effective if they had been able to still hunt, fish, and do some trapping from Inuvik. If they could not get wage labor, and most of them could not, then they had to get social assistance, which eroded both their self-esteem and their ability to support their families.

The findings of this project, along with other studies done in Alaska and northern Canada, cast doubt on the benefits of grand-scale development projects for northern Natives. More local consultations were developed for any new policy initiatives, and more and more local autonomy has been provided to communities and the territories as a whole since the time of these negative impacts. Yet much of the damage had already been done, and northern peoples are still trying to adjust to the problems generated by this period of modernization. Lessons like these these can be learned from many places in the world.

Next we turn to some of the more formal and standard aspects of social impact assessments.

### Stages of Social Impact Assessment

Because of the complexity of social impact assessment and because the anthropologist is normally a member of a large multidisciplinary team, it is a good idea to get an overall perspective on all the phases of SIA. According to Wolf (1983), there are ten stages. As a broad illustration we could begin with proposals to build pipelines from the Arctic to the United States and southern Canada during the late 1960s and early 1970s that became reality with the building of the Trans-Alaska Pipeline system (a proposal to build such a line through the Mackenzie Valley in Arctic Canada was deferred).

The first stages in planning are *problem identification* and *scoping*. In the 1970s the problem was identified as a shortage of oil and gas resources for increasing needs in heating, transportation, and industrial development. Public demands for energy are almost insatiable, and sources nearer larger population centers have been dwindling. To meet a crisis in energy costs, national policy makers might examine several solutions—alternative energy sources, conservation, and finding ways to reduce demand. One favored approach has been to increase domestic petroleum production through increased exploration and the tapping of resources in more distant hinterlands—such as the Beaufort Sea in Alaska and Arctic Canada.

National and even international energy policy proposal approaches would then be formulated to develop these resources. The formulation of such policies would involve politicians, government agencies, and private interests, such as petroleum companies, pipeline consortiums, trucking and shipping companies, and others.

In the scenario, there is a broad plan to start drilling and transporting known resources of oil and gas by linking them with existing pipelines in southern areas or bringing them down by ships to port facilities in Washington. It is here that the broad *scoping* aspects of SIA would anticipate all of the likely regions, peoples, and interests that could be affected by such projects. What states, provinces, and territories will gain some benefits or suffer some disruption? Where will the pipeline pass through in these jurisdictions? What communities would be most affected by the pipeline? Perhaps it will be near particular towns and villages, running along a particular river valley, or near an existing highway that makes it easier for the logistics of construction or provides a shorter distance from source to destination. What other communities and regions might be secondarily affected? There could be communities that, because of their sizes and existing facilities, will become takeoff points for mobilizing labor and supplying equipment yet are not directly on the pipeline route.

Scoping involves a preliminary identification of the publics or social groups that could be affected by the project. In turn, scoping will lead to *profiling*, which will describe the existing circumstances of peoples most affected and try to project the impacts on them regarding costs and benefits. Presumably, consumers in the "Lower 48" of the United States or in the southern regions of the Canadian provinces would benefit by having greater supplies of oil and gas, perhaps eventually at lower costs. Communities manufacturing the pipes and providing the equipment would also benefit as will companies doing the major work. Certain categories of workers and unions representing truckers and pipefitters would also benefit because of the high-wage employment opportunities for their members.

When looking at the communities most directly affected, we could anticipate some mixtures of costs and benefits. During a boom period, local merchants and contractors might benefit enormously from the outside money being spent in the area. Many local workers could benefit through high wages during the construction period, and the pipeline might generate some significant long-term jobs. However, others might bear enormous costs due to the losses or disruptions of their livelihoods or because of the destructions of traditional habitats for hunting, fishing, and trapping. The cost of material goods might become highly inflated, because of scarcities and high demand, and that would negatively affect less affluent residents. And what will happen to the local people when the boom period is over? In most of these cases, as in the earlier Inuvik example, they could end up with far fewer benefits and with severe long-range costs.

The stages of problem identification and scoping would also include methods for the identification of factors, ingredients, and populations in the natural, nonhuman world such as animal and plant species, soils, water sources, habitats, ecosystems, and many other aspects. Ultimately, these dimensions could be united with social factors through very complex systems modeling. In scoping, as many factors as possible must be considered, and some general directions of the costs and benefits should be anticipated. But the research design resulting from these identifications should be open ended enough so that the unanticipated can be discovered.

The next stage is the *formulation of alternatives*. This could include scenarios from one extreme—not proceeding with the project at all—to the other—maximizing the project regarding money, labor, complexity, and scale of the technology involved. The development of alternative scenarios would involve considerations of the sources of funding—private, or public, or mixtures of both, degrees of involvement of labor forces from outside the area, and the involvement of large numbers of local people in the labor force. The formulation of alternatives would consider and specify as many of the technical details as could be anticipated.

*Profiling* is the stage that is most crucial for estimating social costs. Anthropologists, human geographers, or sociologists would be most involved at this point. For our northern pipeline, the populations and communities might include a string of existing settlements along the proposed route that might serve as staging points for the construction. Those communities would contain different subpopulations, ethnic and socioeconomic groups, classes, and occupations and be linked to people living in local rural areas. It is in these situations that anthropologists can be most useful because they can outline the important variables and institutions relevant to any subpopulations. As a matter of fact, the ingredients that are usually profiled are very similar to those considered in traditional holistic ethnographies—the main strength of anthropology.

In a cultural ecological framework, subsistence factors are probably the most significant. How do the people gain their livelihood from the land and waters in the region? What are some of the other key dimensions of the social economy, such as wage labor, employment, and underemployment? Demographics is always important. How does the population break down in regard to age, sex, ethnicity, and significant categories such as levels of education? Health can be highly significant and would include factors of morbidity, mortality, and all of the characteristics of particular health problems. Health factors would also be likely to include an inventory of the local health resources and their use.

A description of community organization is essential. This would include a sketch of all the significant social groupings and discussions of how local leadership is determined, how decisions are made, the degree of conflict present, how it is resolved, and an inventory of all significant community facilities and organizations. Descriptions of local family structures, kinship, inheritance rules, land tenure systems, and resource allocations would all be included. Collecting information about socialization and education in formal and traditional senses might be important because, for instance, educational levels might prove significant for any possible future employment or training of local workers. Religion and spirituality should not be excluded. For instance, local people might regard certain features in the landscape as sacred. There might be serious conflicts if these features were disturbed during construction.

Finally, significant values, as expressed culturally and as related to the development issues, should be taken into account. Such ethnographic profiling would not be just a static characterization or listing of traits but would be a dynamic, holistic, and meaningful connection of the ingredients. It would attempt to show existing strengths and weaknesses of the local region or community. Ideally, it would demonstrate informal and not-so-obvious dimensions of the local culture, which might include, for example, the normative powers of gossip, social solidarity, and homogeneity in maintaining social cohesion and minimizing antisocial behavior. Profiling might look at the degree to which people in the local area are already used to contacts with outsiders or at how often they had gone beyond the region and into more cosmopolitan areas seeking wage labor in the past. It might attempt to assess the degree to which locals actively seek change, perhaps to better their material conditions. Alternatively, it might note that people had developed a mistrust of outsiders and outside development because of previous fiascoes or exploitations. As much as possible, all of these data should be placed in a deeper time context. Trends might be outlined through time in a series of studies of important issues such as changes in family structure and socioeconomic strategies.

An anthropologically trained observer might collect all of this information, but a division of labor is more likely among a team of social scientists including economists, geographers, and sociologists who collect more quantitative data while the anthropologists provide context and cultural background. To some extent, that might depend on the complexity of the region or its communities. It also might be a function of whether there is pressure to collect the information rapidly. Methodologies and sources of data could include censuses, archives, public documents, questionnaires, focus groups, and key-informant interviews, but many people, including geographers and sociologists, have told me that the best and most effective methods of profiling the significant features are ethnographic. This is because all the important categories of impact cannot be anticipated until the local people are involved and



investigated in their own context. One of the overall goals of profiling is to try to measure the current status of all the significant categories in anticipation of the next stage.

For an anthropologist, the next stage could present the greatest challenge. It is that of *projection*. Predictions can draw upon substantive research on similar topics in other communities. The social scientist would usually make use of the findings of general social science as well as literature specific to the area and the topics examined. Certain theoretical orientations from sociocultural change studies in anthropology could be of some guidance. These include cultural ecology, cultural change theories, political economy, and much of the important literature and controversies associated with development and modernization.

For example, the projections might identify trends toward modernization or increasing reliance on wage labor or transfer payments. Trends might also include the abandonment of traditional economies, or, alternatively, their current robustness, especially as associated with the local people's sense of their own identity in connection with their spiritual linkages to the land. Overall, a set of informed predictions is expected.

At any rate such projections would blend into the next stage, that of *assessment*. We return to each of the alternative scenarios for development, looking at each and then assessing its likely impact on the communities. Suppose, for example, that the various pipeline alternatives would or would not involve bringing in a certain number of outside workers. We would then ask what would be the effects of bringing in 10,000 unattached male workers into an isolated northern region upon family life, community cohesion, and conflict resolution. We could compare that to using local labor and having any outsiders located at a fly-in construction camp. Essential variables like this would be considered in conjunction with each other while looking for systematic connections and presenting alternative scenarios. These modelings are usually done through sophisticated computer and systems analysis and rarely by the anthropologist.

The projections are then written up in digestible forms for the significant policy makers and for the people to be affected. Complex quantitative analyses are packaged into readable qualitative forms. Then *evaluation* occurs. Once the significant publics are identified, we can speculate on costs and benefits for each one according to the alternative scenarios. These publics should be consulted directly, possibly through public hearings and forums. After these evaluations and consultations, we choose the most desirable scenario. However, it may be discovered that the costs are more than anticipated and the disadvantages too extreme for local peoples and the environment. So then the whole development plan is scrapped permanently or postponed until such costs and disadvantages can be overcome.

That actually happens from time to time. For instance, during the 1960s the proposed Ramparts Dam Project in Alaska, involving the U.S. Army Corps of Engineers, was canceled because of the enormous damage expected to important wildlife habitats, especially to duck-reeding grounds. It also would have disrupted the local Dene people by the proposed relocation of their communities. Similarly, in the mid-1970s, the Mackenzie Valley Pipeline proposal was indefinitely shelved because of the projected large-scale disruptions of Native people living along its projected pathway.

Let us assume that there are enough compelling reasons for going ahead with one of the projected versions. Costs and benefits have been recognized and documented through the projections and evaluations. This leads to the stage of *mitigation*, requiring calculation of

compensations to those peoples who will be most seriously and negatively affected by the project. Most of them usually live in the vicinity of the construction sites. Perhaps these people will receive a major cash settlement to be distributed on a per-capita basis, or a development fund could be established to assist future generations. People may be relocated to a more favorable or equivalent setting. A new town might be built for them. A significant proportion of the jobs created, both during and after the construction period, might be guaranteed for them. If they currently do not have the skills to perform these jobs, then specialized training programs might be developed for them. The people themselves may have desired changes in their communities before the proposal was considered. They may have wished for better housing or improved health or educational facilities. These may be provided to them, through mitigation, as a way of improving their standard of living and as compensation, or mitigation, for likely damages. It is in the process of mitigation that anthropologists may play helpful roles. They can verify and detail the claims of traditional users of the environment; they may help to document current needs and aspirations; they may document how the project may disrupt peoples' lives.

The final two stages of the process of social impact assessment are *management* and *monitoring*. Management is usually performed by the government of the jurisdiction most affected by the project, perhaps in partnership with the companies engaged in the development along with representatives of local communities. It focuses on the goals and regulations established by the previous stages, including the actual construction. Usually a great deal of scrutiny is required to see that the social, human, and environmental considerations are nurtured rather than just the technological and economically oriented ones. Monitoring involves careful examination of the actual outcomes of the project according to the criteria originally established. This is essential for any considerations of possible expansions of the project. This has been the case in northern Quebec, where a number of anthropologists from McGill and McMaster Universities have been studying the consequences of the first phase of the massive James Bay Hydro Agreement that affected the Cree and Inuit in northern Quebec (Salisbury 1986).

### **ethnography and the Ecological Perspective Social Impact Assessment**

Public consultations through community meetings, briefs, and hearings are important as sources of information. Focus groups, key-informant interviews, questionnaires, archival research, and the use of public documents along with a standard reliance on quantifiable measures, such as social and economic indicators, are all important and can be used by the applied anthropologist. But ethnography is of primary importance with its emphasis on participant observation.

Roy Roper (1983) illustrates the usefulness of this approach through a case study. Furthermore, he adds another dimension, cultural ecology, one of anthropology's more powerful theoretical orientations. The case study illustrating his point is related to farming in eastern Illinois. Roper describes impacts of a proposed large-scale water reservoir that would greatly expand possibilities for irrigation. But, in the process, many farmers would have been displaced, and their communities would be affected in other ways. Through participant

observation, he became immersed in the local context, and, through his cultural ecological perspective, he became familiar with important local behaviors and attitudes that related to the use and meanings of land. He provided details on households and domestic arrangements that were crucial to land use.

To begin with, he observed that all farm units are not at an advanced stage of development. Within individual lifetimes, different farmers would be at different stages of a developmental cycle. Young farmers are at the most difficult stage—they are encumbered by large land debts and the need for capital equipment such as tractors and combines. Older farmers may be much better off, having paid for their land and increased the scales of their operations and resulting profits. Farmers approaching retirement are facing the task of gradually disentangling themselves from their operations, selling or renting land to others, and perhaps setting up their sons or other heirs in farming.

The original plan called for the displaced farmers to be relocated in other regions. There they would receive cash settlements to purchase new land based on the values of their previous properties. Roper concluded that if the plan proceeded this way, farmers would not be equitably mitigated. Those nearing retirement might find such buyouts adequate and very timely for their needs. Others in more advanced stages of their operations would likely make effective adaptations to farming in the new area. But the most disadvantaged would be the younger farmers, whose assets would be few in terms of land and machinery and whose debts would be very high. If they were moved to a different area, they would not have the advantages of the support of extended kin or other well-established networks of neighbors and friends. Those willing to give them a "break," such as bachelor farmers and those disentangling from their operations, would not be there to provide assistance in rental agreements or through the gradual sale of necessary land to them.

In any process of mitigation, there should be different considerations for each type of farmer, according to their developmental stage, family type, and farm operation. In discussing these realities, Roper refers to the *fallacy of aggregation*, whereby impacts and needs of a minority group or category are submerged within larger or more "average" categories or circumstances. Aggregation is usually brought about by the more standard econometric approach—statistically it would total assets in land machinery and other holdings and come up with some per-capita figure that then could be applied in a compensation formula for all those having to be displaced.

So, anthropologists can be extremely effective in presenting valuable insights, through empirical participant observation when demonstrating the ranges of variation within seemingly homogeneous groupings (such as Illinois farmers) as well as when different ethnic or cultural groupings are involved.

Roper demonstrates the value of the cultural-ecological approach in SIA. The ecological approach can place human behavior in its local context, describing land and water resources. Land is frequently at the center of proposed development. Land can be viewed ethnographically in social and cultural context and from many angles. Land is a source for extracting resources for cash, for subsistence, and for exchange with others. Land can be seen as a context for an occupation. It can be seen as a medium of exchange for power or status. Anthropologists could show the meanings and values attached to land and demonstrate how land interrelates to events and contexts like birth, succession, migration, retirement, and within local seasonal cycles. Categorically and processually, land can account for the social

units, and the ranges of variation that are found in connection with other factors and characteristic decisions that are generally associated with each type. Among the processual dimensions are the development of units through time and the types of decisions that each type of farmer has to make according to household or operational needs.

Beyond these cultural ecological factors, he suggests that ethnographic analysis is a very effective way for presenting the relevant information because of its qualitative dimensions. It puts a human face on any decisions that must be made because it describes real people living actual lives. The alternative types of data presentation, involving statistics, graphs, and tables, do not have the same sensitivity in showing the plight of real human beings who are faced with change. As Roper (1983: 104) says, ethnography can "be equated with empathy." At the same time, while speaking a simple, accurate, and empathetically human language, ethnography can become continuously more refined and capable of describing process, domestic cycles, and internal variations.

## Challenges and Controversies

Anthropologists face challenges and controversies in the social impact assessment field, and they have to be prepared for them. In many cases, social impact assessment is not a neutral process. The monitoring or administration of studies may be done by government agencies, supposedly acting as guardians of the public interest. It might even be done through the financing and administration of the mining, petroleum, pulp, and paper companies, which made the proposal in the first place. In both situations there may be very strong expectations and subtle pressures on contract researchers to make them discover good reasons why the project should go ahead and why any social costs should be minimized. The company wants the profits, the government wants to take credit for job creation as well as benefit from the increase in tax revenues, and there may be various pressures on the government through unions, construction companies, or other lobbying to proceed with development.

By training and general inclination, anthropologists may be genuinely concerned about the impact on the local communities, especially when they see much greater local costs as likely impacts. Yet ironically, the local people might resent the anthropologist's presence, perhaps intuitively anticipating the cooptation of his or her findings in favor of the development proposal better than he or she does. The locals may be annoyed because the anthropologist seems to legitimize a process merely by participating in it. Moreover, the community itself may be divided into several factions, for and against the development. The anthropologist is faced with the dilemma of deciding which side to promote and how to convey the subtleties of the differing points of view.

Other difficulties may result from working within a multidisciplinary team. A lone anthropologist may be an added-on, subordinate member of a group oriented toward "hard" numerical data that supposedly will precisely "measure" costs and benefits in dollar terms. Anthropologists may be frustrated because they cannot persuade the other members of the team that qualitative methods are necessary to get the local points of view about dimensions of life that are important to them and have impact on them. They may object that there is not enough attention given to meaningful public consultation or that the proposals offered for

Summ

mitigation are completely naive and inappropriate to the people affected. Given their understandings of qualitative methodologies and ethnography, anthropologists may be dissatisfied with the time allocated for completing the baseline or profiling studies regarding the current conditions about the people. An important part of the seasonal cycle may be neglected if the findings have to be completed by a certain date.

In most cases, solutions or comfortable compromises can resolve many of these difficulties. Much of the answer is as simple as clarifying appropriate contracts and understandings at the very beginning. Certain conditions would have to be met—that there be full consultation and partnerships in research with the communities in question; that some co-researchers and assistants have to be hired from the community; that minority opinions be fully aired; and that all reports be fully vetted and discussed through public meetings and forums. Anthropologists should make arrangements with employers for a set of preliminary discussions with the community under consideration before going any further with an SIA. In some cases, it could even be arranged for the community to receive subcontract funding and hire some people for their own social impact assessment. The anthropologist could make sure that the importance of his or her place on the research team is fully understood and that his or her report be allowed to stand on its own.

Anthropologists also have the option of working “outside of the system,” of doing a formal social impact assessment as an advocate for the local or “native” cause. Anthropologists, in consultation with other opponents of the development, could also rally the press toward understanding the inequities or damages involved in the proposed development.

Finally, it should be pointed out that, even though it is always prudent to anticipate the worst, social impact assessments are frequently benign. There are situations with ample time for consultation; the positions of the anthropologists are secure and uncompromised, and the processes of assessment and mitigation are conscientious and fair. In some significant cases, proposals have been abandoned and governments have learned from the accumulated wisdom of environmental and social impact studies.

## ary

Anthropologists engaged in social impact assessment as a potential career track are beginning to find policy makers and fellow investigators from other disciplines fairly open and understanding of anthropology's value for the field. Anthropologists have repeatedly proved the merit of ethnography in developing effective sociocultural baselines for profiling institutions, behavior, and beliefs that need to be projected in terms of probable impacts from proposed developments. For that purpose, theoretical and conceptual frameworks derived from cultural and human ecologies and the anthropological study of change—through acculturation, studies of technological innovation and social effects, and modernization and development—have all given useful insights for predictions and formulations run through systems analysis. Of all the subfields within applied anthropology, SIA has probably gained the most from academic theory and previous ethnographic studies. Also, in an unusual circumstance of actual practice, applied impact studies, in turn, have great potential to contribute to further theoretical insights.

## RECOMMENDED READINGS

Bee, Robert L.

1974 *Patterns and Processes: An Introduction to Anthropological Strategies for the Study of Sociocultural Change*. New York: The Free Press.

Bodley, John H.

1998 *Victims of Progress*. Fourth Edition. Mountain View, CA: Mayfield.

1995 *Anthropology and Contemporary Human Problems*. Third Edition. Mountain View, CA: Mayfield.

Bowles, Roy T.

1981 *Social Impact Assessment in Small Communities: An Integrated View of Selected Literature*. Scarborough, Ont.: Butterworths.

Derman, William, and Scott Whiteford (eds.)

1985 *Social Impact Analysis and Development Planning in the Third World*. Boulder, CO: Westview.

Dixon, Mim

1978 *What Happened to Fairbanks? The Effects of the Trans-Alaska Oil Pipeline on the Community of Fairbanks, Alaska*. Boulder, CO: Westview.

Erickson, Paul A.

1994 The Social Environment. In *A Practical Guide to Environmental Impact*. Pp. 147-201. San Diego: Academic.

Fensterbusch, Kurt, L. G. Llewellyn, and C. P. Wolf (eds.)

1983 *Social Impact Assessment Methods*. Beverly Hills, CA: Sage.

Goldman, Lawrence R. (ed.)

2000 *Social Impact Assessment: An Applied Anthropology Manual*. Oxford, UK: Berg.

Jacobs, Sue-Ellen

1977 *Social Impact Assessment: Experiences in Evaluation Research*. Mississippi State University Occasional Papers in Anthropology.

Lane, Theodore

1987 *Developing America's Northern Frontier*. Lanham, MD: University Press of America.

Preister, Kevin

1987 Issue Centered Social Impact Assessment. In *Anthropological Praxis; Translating Knowledge into Action*. Edited by Robert M. Wulff and Shirley J. Fiske. Pp. 39-56. Boulder, CO: Westview.

Tester, Frank J., and W. Mykes (eds.)

1981 *Social Impact Assessment: Theory Method and Practice*. Calgary, Alb.: Detselig Enterprises.

Disa