# SOCIAL IMPACT ASSESSMENT:

## A CONTRIBUTION TO THE STATE OF THE ART SERIES'

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Social impact assessment can be defined as the process of assessing or estimating, in advance, the social consequences that are likely to follow from specific policy actions or project development, particularly in the context of appropriate national, state, or provincial environmental policy legislation. Social impacts include all social and cultural consequences to human populations **of** any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs, and generally cope as members of society. Cultural impacts involve changes to the norms, values, and beliefs of individuals that guide and rationalize their cognition of themselves and their society.[3]

While SIA is normally undertaken within the relevant national environmental policy framework, it is not restricted to this, and SIA as a process and methodology has the potential to contribute greatly to the planning process. **As** an example, New Zealand health professionals have recently been planning the introduction of new health care systems in the indigenous Maori communities and were looking at SIA to assist in the process of evaluation of alternatives, and to help in their understanding and management of the process of social change (Association for Social Assessment 1994).

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[1] A longer version of this article has appeared in ***Environmental and Social Impact Assessment*** published by John Wiley and Sons (UK) in 1995.

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[3] Largely based on the definition provided by the Interorganizational Committee (1994).

These professionals realized that social change would occur as the result of the introduction of new health care delivery programs. They realized that they needed a way to involve and integrate Maoris in planning for the proposed programs. Although none of these health care professionals had formal training either in managing social change or in undertaking SIA, they at least recognized the need to understand in advance what changes would likely occur depending upon the type of health care system that was implemented—precisely the type of information provided by a well-done SIA. This New Zealand example highlights opportunities for **SIA.** From the standpoint of a practitioner implementing social policy decisions, SIA research provides a direction for understanding the process, and guidance in the management of social change in advance of the implementation of the proposed changes. It thus facilitates a decision-making process to choose between alternative possibilities.

In general, the SIA process provides direction in (1) understanding, managing, and controlling change; *(2)* predicting probable impacts from change strategies or development projects that are to be implemented; **(3)** identifying, developing, and implementing mitigation strategies in order to minimize potential social impacts (that is, identified social impacts that would occur if no mitigation strategies were to be implemented); **(4)** developing and implementing monitoring programs to identify unanticipated social impacts that may develop as a result of the social change; (5) developing and implementing mitigation mechanisms to deal with unexpected impacts as they develop; and finally (6) evaluating social impacts caused by earlier developments, projects, technological change, specific technology, and government policy.

## Benefits Gained from Conducting Social Impact Assessment

Often, the greatest social impact of many projects or policies, particularly those planned for community benefit (as in the New Zealand health care delivery program), is the stress that results from the uncertainty associated with it—for example, living near a major development and being uncertain about the impacts that the project may have. Sometimes just experiencing a situation of rapid change is the cause of stress. By maximizing community involvement in the SIA process—not just by consultation, but by directly involving locals in planning teams—uncertainty is reduced, the legitimacy of the SIA and the development projecl is enhanced, the accuracy of the SIA

is increased, and the capacity for the SIA to mitigate impacts is maximized. Previous research has shown that local people from the affected communities have made substantial contributions to SIAs even though they may not be experienced in administrative procedures.

While the requirement to undertake **SIAs** may seem to be an unnecessary luxury that adds to the costs of projects, there are substantial benefits to be gained from undertaking them—for governments, communities, and developers. **SIAs** that involve the community minimize local resistance to projects, thereby reducing disruption; they increase project success; and they prevent major planning disasters and associated costs. In fact, SIAs may save money in the long run. It is particularly important that communities and governments insist on SIAs being undertaken because in the majority of cases, the costs of rectifying social and environmental impacts of development are borne by the public sector, not by the corporations that created them.

Even where there are mechanisms (for example, regulatory or legal action) for extracting compensation from companies for damage or impact they may create, the compensation is likely to only cover direct impacts and not the vast amounts of indirect impacts. In local community settings, the compensation itself may have a considerable social impact. It is possible that some groups would be less affected by the development than by the compensation. Nevertheless, there are examples where compensation and other payments (mining royalties, for example) to local peoples have been used in very positive ways for community development. The establishment of an Aboriginal-owned and -managed airline service, and an Aboriginal radio/television station in the Northern Territory of Australia, are examples.

In any case, the onus of proof to establish that a community, or certain groups within a community, did experience significant social impacts would rest with the community. For social impacts especially, it would be difficult to establish proof to the satisfaction of the courts. Furthermore, there are many impacts that cannot be mitigated or rectified so compensation is not necessarily a desirable strategy. Once local cultural life is affected, it is affected for good; therefore, it is important to prevent the majority of impacts before they actually happen. SIAs should be required of all public and private activities (projects, programs, policies) that are likely to affect social life.

The costs of undertaking an SIA should be included as part of the costs of the project and should not bc borne by the government or by the local community. However, care must be taken that the standard of the SIA undertaken satisfies the government and the community. Some review process is rcquircd to cnsurc that all SlAs and **EIAs** are up to a required standard.

## A BRIEF HISTORY

Social impact assessment was formalized with the introduction of the **U.S.** National Environmental Policy Act (NEPA) legislation of 1969. It became evident that altering the environment of the natural ecosystem also altered the culture and social organization of human populations. In 1973, after the decision had been made to build the Alaskan pipeline from Prudhoe Bay on the Arctic Sea to Valdez on Prince William Sound, an Inuit tribal chief commented, "Now that we have dealt with the problem of the permafrost and the caribou and what to do with hot oil, what about changes in the customs and ways of my people?" (cited by Dixon 1978:4; see also Berry 1975; McGrath 1977). Would the traditional culture and way of life be changed by such a massive construction project? Furthermore, because Alaska had a very small population, few of the estimated 42,000 persons needed to work on the pipeline during peak periods would come from the state. How would the influx of construction workers that spoke a different dialect (of English) and brought a distinctive lifestyle with them affect the local culture'? Because of these impacts on human populations, the term 'social impact assessment' probably was first used in 1973 to refer to the changes in the indigenous Inuit culture due to the pipeline.'

The new field of SIA grew out of a need to apply the knowledge of sociology and other social sciences in an attempt to predict the social effects of environmental alterations by development projects that were subject to the NEPA legislation in the United States and the Canadian Environmental Asscssmcnt and Rcvicw Process (EARP) which was passed in 1973. Most of the early SIA procedures were developed by social scientists located within federal, state, and provincial agencies, or by consultants hired by the engineering and architectural firms that prepared the larger environmental impact statements (EIS). These early impact assessors used social science

[4] In Europe, a 1973 study into the social impacts of the then proposed Channel tunnel (which was not completed until 1994) represents one of the first European predictive SIA studies undertaken (Economic Consultants 1973).

labels in their EISs, but few of the concepts had a connection to prior literature on community and cultural change. U.S. assessors opted for models that required such data as the number and types of new workers as an input to predict quantitative social changes in the geo-political area of impact (Leistritz, Murdock 1981). The Canadian assessors focused more on a social action model, with emphasis on helping the impacted population adjust to the impending change (Bowles 1981, 1982).

The inquiry by Chief Justice Thomas Berger of the province of British Columbia (Canada) into the proposed Mackenzie Valley pipeline, from the Beaufort Sea in the Yukon Territory to Edmonton (Alberta), was the first case where social impacts were considered in project decision making (Berger 1977,1983; Gamble 1978; Gray, Gray 1977). The inquiry was important because social impacts on indigenous populations were considered in depth. Furthermore, native populations were provided with funding to present their views and hearings were conducted in native villages and in local dialects.

Of course, social impacts have been considered in different contexts throughout history. In anthropological analysis, retrospective analysis of social impacts has been a major feature of the discipline. Examples that form part of the literature of SIA include Cottrell (1951) and Sharp (1952). The social impacts of tourism has been a major field of study in SIA as the international tourism market has expanded, with early anthropological analyses dating back to Forster (1964). Eric Cohen (1971, 1972, 1979, 1984) has been a leading researcher in this area of study. The social impacts of mining has also been a major field of study for SIA, with social scientists being consulted to improve the design of mining towns in order to minimize social problems. An early Scottish example is Francis (1973); in Australia a number of studies were undertaken by the Pilbara Study Group, part of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) (eg Pilbara Study Group 1974; Brealey 1974; Burvill 1975); while in Canada, the Institute of Social and Economic Research at the Memorial University of Newfoundland has undertaken and published numerous studies into the impacts of oil exploration and mining. Development studies is another area with an interest in social impacts. An early study into the social impacts of relocation due to the construction of a dam in Africa is Colson (1971). In addition to tourism, mining and dams, nuclear power and new road (highway) construction have also provided the impetus for much **SIA** research.

The first international conference on SIA was held in Vancouver, British Columbia in 1982 and gave academic and political credibility to the new field. Since then, the activities of this first conference have been combined into the International Association for Impact Assessment (IAIA) which held its first meeting in 1981 in Toronto, Canada.

By 1983, most US federal agencies had formalized environmental and social assessment procedures in agency regulations. The European Economic Community began to recommend EISs for their members in 1985, and by 1989 the recommendations became a requirement. In 1986, the World Bank decided to include both environmental and social assessment in their project evaluation procedures because liabilities were increasing for projects evaluated strictly on economic and financial criteria. Since then, SIA has become an important requirement (although to varying degrees) around the world as nations adopted and modified the original NEPA model.

In the United States, SIA reached its highest legitimacy when at the conclusion of the April 1993 'Forest Summit' in Portland, Oregon, President Bill Clinton mandated that a social assessment of each timber-dependent community in the Pacific Northwest would be a required component in deciding among alternative management futures for old growth forests. This directive was significant because it formally recognized SIA as a component of the policy-making process. Although the social assessment team of the federal eco-system management assessment team (FEMAT) did not conduct a formal SIA for each of 300 communities under study, they did use much of the literature on community change and cultural history (particularly for indigenous populations) as a basis for making assessments of community response to forest management alternatives (see Clark, Stankey 1994; Stone 1993).

## SIA IN THE LARGER CONTEXT OF EIA

SIA has become a part of project planning and policy evaluation and part of environmental impact assessment (EIA) as a result of the recognition that social considerations must be included alongside and even in lieu of solely economic criteria in the evaluation and decision process. The definition of the environment in impact assessment has been expanded to include a 'social component'. **SIA** now increasingly carries equal weight with both economic and environmental impact assessment in decisions to change policy or approve ecosystem alteration (USCEQ 1986).

However, there are few documented cases where SIA has actually made a difference in the decision process. Two decades later, the Berger Inquiry continues to be cited as **the** case where the findings from a SIA provided the justification not to proceed with the proposed development.' In that case, the SIA provided justification to stop the project. Similarly, there a few cases which point to SIA as a way to enhance benefits or make a better policy decision. The spirit of the NEPA was that knowing about and understanding project effects in advance could make the proposal better through the implementation of mitigation and monitoring procedures. Although not benefiting from the same level of legal support as EIA, SIA has achieved wide acceptance as evidenced by the following:

- The document, ***Guidelines and Principles for Social Impact Assessment,*** is important, not only because social scientists could agree on the content, but also because it is written to fit within the NEPA process and regulations now used by **U.S.** Federal and State agencies. SIA is tied directly to **EIA** by including public involvement, identification of alternatives, baseline conditions, scoping, projection, evaluation of alternatives, mitigation and monitoring in the SIA process.
- In early **1993,** the **U.S.** Council on Environmental Quality began to explore ways to formally incorporate SIA into their revised EIA regulations. While the **1978** Guidelines for NEPA (amended in **1986)** have served as a model for project evaluation, they do not specifically require SIA. Rather, the courts have mandated that selected social components must be included and some federal agencies have included SIA in their regulations and handbooks. In addition, American Indian concerns and rights have been incorporated into the NEPA process particularly with regard to historic lands and spiritual places.
- The American Sociological Association held a professional workshop on SIA in August **1993** and has plans for another on integrative SIA.
- The number of universities listing courses in SIA is increasing, particularly in urban and regional planning departments as part of an environmental planning program. As well, universities are incorporating

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[5] **There have been other examples. For example, in Australia, a proposed mine at Coronation Hill in the Northern Territory, and a High Temperature Incinerator for Intractable Waste which was to have been built in Corowa in rural NSW, provide examples of situations where social impacts stopped the projects even though they were arguably acceptable** on **environmental grounds. However, these do not come close to the international fame of the Berger Inquiry.**

**SIA** in curricula on community development, health and educational needs assessment and as a component in policy analysis.

- The U.S. Agency for International Development has continued to respond to the NEPA directives and has incorporated SIA-like procedures (which they term Social Soundness Analysis) into their project proposal and project identification documents.
- Recent rulings by **U.S.** courts have upheld the need for **SIA** in project evaluation procedures; a February 1994 **U.S.** Presidential Executive Order expanded SIA to include the issues of environmental racism and justice; and the FEMAT project, referred to earlier, highlighted the need for a 'social component' in all ecosystem management activity.

Despite these advances, the fact remains that in the two decades since SIA became a recognized sub-field **of** research and policy application, there are few examples where its use has made a difference in the project/policy decision process. On the other hand, EIA has been shown to be one of the most far ranging and significant methodologies to improve projects and policies. **SIA** is recognized as important, but has yet to be integrated sufficiently in the EIA process. Integration into the institutionalized policy and decision making process will depend upon a proven track record of making projects and policies better, as well as an understanding by policy makers as to what SIA actually is all about. However, the SIA process must always help communities understand the impacts of external change, and defend communities' interests.

## PROBLEMS CONFRONTING SIA

Despite the advances of SIA, some conceptual, procedural and methodological difficulties remain. These can be grouped into four major categories:

1. Difficulties in applying the social sciences to **SIA**
   - Units of analysis, theoretical models, and the language of the various social science disciplines are sometimes contradictory or inconsistent, making interdisciplinary communication difficult.
   - Social science traditions, especially sociology, tend to be critical and discursive, rather than predictive and explanatory. Thus the core theoretical disciplines which comprise SIA fail to provide background in the processes of developing conceptual frameworks or valid measures for testing the interrelationships among variables.

**2.** Difficulties with the SIA process itself

- Data are often poorly collected, and therefore projections are based on inadequate information which is often isolated, not systematically collected and therefore lacks validity checks. Estimates about the consequences to human communities of likely future events should be based on conceptual relationships developed from theory and previous research supported by data collected utilising the appropriate methods and subject to empirical verification.
- The methodologies for assessing social impacts are numerous and complex, and exist as a process as much as a discrete entity. Consequently, they are difficult to document and to evaluate.

**3.** Problems with the procedures applying to SIA

- SIAs are often done by consultants who do not know relevant social and economic theory, and who may not be trained in either SIA or social science methodology. There is no registration of suitably qualified and experienced SIA practitioners and some overly-zealous consultants have claimed expertise that they didn't have.
- Regulatory agencies and corporations have not checked the credentials **of** consultants who undertake SIAs or insist that SIA consultants have appropriate social science training.
- There is little evaluation or audit of SIA reports, and agencies and corporations receiving SIA statements seldom take the time to determine the validity and reliability of the contents of these reports.
- Relevant literature on SIA is hard to find, and often not accessible. Many valuable resources are not published, but exist only as consultancy reports. Because of both litigation and commercial secrecy concerns, consultants, proponents and government agencies often prefer not to publish or make widely available many reports. Where reports are published, they often do not provide the detail necessary to fully evaluate the methodologies used and the validity of the claims.
- SIA is seen as a single event, as a discrete statement of impacts, not as a process which develops its full potential in the mitigation of impacts, and as a process which governs the planning and development process. The regulatory frameworks under which EIA-SIA are undertaken (including NEPA and NEPA-like structures) impose this discrete event mentality.
- Because of its project-based conceptualization, SIA, when undertaken according to the regulatory guidelines, although not to its full

potential, can not address cumulative impacts resulting from multiple projects.

- While mitigation is part of the project-based conceptualization, the potential for the development and implementation of effective and ongoing mitigation strategies is limited by the failure to see SIA as a process.
- Impact statements tend to be used to determine whether a project should go ahead or not; and if approval is given under what conditions, such as what mitigation strategies and/or what compensation should be paid. The failure to utilize SIA as a process with effective monitoring, mitigation and management, means a reliance on the use of **SIA** as an approval mechanism and to determine the level or form of compensation. Thus, approval may be denied to projects that potentially could be acceptable provided that certain mitigation strategies were in place. And other projects are approved, with compensation paid, even though the project and the compensation (or royalties) itself may create considerable social impact that appropriate mitigation and planning may have avoided (Connell and Howitt 1991; O'Hare 1977; Swartzman, Croke, and Swibel 1985).
- In some countries, there are statutory requirements to undertake SIAs, but even in these countries there is seldom a requirement for the results of **SIAs** to be seriously considered. **SIAs** often go unread, at least unheeded, and mitigation measures seldom taken seriously.
- As a component of the policy-making process, SIAs will come under increased scrutiny in the adversarial setting of the public hearing and judicial review process, therefore, the assessment must be based on rigor and at least a minimal level of quantification. If an assessment is questioned in **a** legal setting, it will be by another social scientist hired to critique the methods and conclusions. Because of the nature of public settings, data and ideas will be evaluated in the context of special interests. In the United States and Canada, the various reviews of **SIAs** are done in the setting of formal hearing. As such, the **SIA** practitioner needs some peer-supported guidelines and principles for justification of the general methodological approach and sociological content (that is, social variables) of the study. These are provided by, in the United States, at least, the ***Guidelines and Principles for Social Impact Assessment***.

**4.** There is what can be described as a prevailing 'asocietal mentality" an attitude that humans don't count—amongst the management of regulatory agencies and corporations (proponents undertaking the proposed development) which commission **SIAs.** This mentality also extends to politicians at all levels of government, public officials, physical scientists, engineers, and even economists and some planners. Persons with this mindset do not understand—and are often antithetical to—the social processes and social scientific theories and methodologies which are very different in form from those in the physical sciences in which these people are often trained. Because of the power of this mentality within the regulatory and administrative subcultures, even when sympathetic individuals join, they are often socialized into this mentality.

The implications of this asocietal mentality for **SIA** are—

- **A** failure to accept the need for **SIA** in the first place. This mentality naively assumes that development is good and that there are no social (and sometimes no environmental) consequences of development.
- There is no recognition of the need for special skills or expertise to assess social impacts. Since no credence is given to society as a special entity, it is assumed that anyone can determine the social consequences of development. The legitimacy and unique knowledge of the applied field called **SIA** is not yet fully recognized, understood and accepted.
- Since there was no understanding of the nature of potential impacts, or of the concerns that community members might have, there was no expectation that **SIA** statements should provide anything other than a statement about the change in the number of jobs, and the number of children going to school. **SIA** was little more than primitive demographic impact assessment and fiscal impact assessment. With this expectation, it was not in the interests **of** consultants to provide more, even if they were capable **of** doing so.
- Persons not familiar with **SIA** have difficulty in understanding the use and integration of public involvement in the **SIA** process. In some organizations and agencies, public involvement has been equated with **SIA.** The problem comes when administrators or decision-makers believe, that because they have done public involvement, they have done **SIA.** Public involvement is a component of the **SIA** process and may be used to collect data on key **SIA** variables. Public involvement is also part of the initial

scoping (and is required under the NEPA regulations) and must be incorporated throughout the entire process, but is not social impact assessment!

- Consultants who intended to undertake a thorough SIA were thwarted because of the lack of understanding about how long it would take and how much it would cost to do the job adequately. Reputable consultants were under-bid in the tender process by charlatan (at least with respect to SIA) consultants intending to do a superficial analysis.
- There is a lack of understanding, and often disagreement with the results of SIA studies. Because individuals possessing this asocietal mentality do not understand social processes, they often rejected the results of bone-fide consultants whose results often contradicted their notions of common sense.
- Another problem is articulating the complex stakeholder network (both corporate and community-based) in which SIA and EIA is conducted. Special interest groups will define problems and see results of studies from their point of view, and attempt to use SIAs to their particular advantage, possibly distorting the intent of the study or the specific result in the process. In a litigious and/or confrontationist situation, altruism and concern for such global (and even regional) goals as a quality environment and the future welfare of an impacted community are seldom part of the debate.
- Because in the physical sciences generally there tends to be clearly defined problems for which singular solutions can be identified with the appropriate analysis, there is a belief that social issues are similar, and an expectation that SIA statements will deliver clear statements of social impacts and that singular mitigation strategies can be identified.
- There is a complete lack of recognition of the complexity and heterogeneity of society, and how the impacts of developments benefit and disadvantage different components of society in different ways.

## FUNDAMENTAL ISSUES IN SIA

In addition to the difficulties confronting SIA, there are a number of more complex, fundamental issues affecting SIA, which are problematic in most situations where SIA is to be applied. These issues are best expressed as questions to which definitive answers can not be easily given.

### *Who have legitimate interests in the community? How is the 'affected community' to be defined and identified?*

It is fundamental to SIA that in all development projects, the distribution of costs and benefits is not equal across the community (Elkind-Savatsky 1986; Freudenburg 1984). One of the tasks of SIA is to identify the stakeholders, the winners, and the losers in any development. Usually, those examining social impacts are concerned about the social distribution of costs and benefits, usually in terms of social class and ethnic minority groups. A further concern of SIA is to predict how the nature of the community will change as a result of a specific project. However, 'community' is a reified concept in sociology. In a stable community (one in which the rate of change of members is low) faced with a single project development, it is relatively easy to identify bona fide members **of** the community. Most projects bring newcomers to a community, and development itself promotes additional growth in service industries (the regional multiplier). In a community experiencing rapid growth, newcomers to the community may be very different in values, attitudes, and behaviors to the existing community members. Their concerns vis-à-vis any development project may be very different from the established local community's. If a community is experiencing rapid growth, should newcomers be regarded as part of the community and their concerns be included in any impact assessment? Or are they part of the problem?

Rural rezoning and rural-urban fringe development provide many examples of situations where newcomers, predominantly middle-aged professionals, have very different concerns with respect to further development than the pre-existing (often farming) communities. Attractive locations, such as coastal zones, which are subject to tourist development and inundation of new settlers provide additional examples of such situations. The environmental assets of many coastal locations attract city leavers. In the case of Port Douglas in northern Queensland (Australia) and northern NSW (Australia), successive waves of newcomers have each arrived, each causing their own impact. At the time when each wave of new settlers arrives: these new arrivals typically either want no further development and no more settlers (thus pulling up the ladder); or want the opportunity to develop income producing activities that may have significant social (and environmental) impacts. Because of the rate of growth experienced by the community, and the successive waves of immigration to the region, at any point in time when an SIA is to be undertaken, how is the SIA consultant to establish what the views of the community are? Whose views are entitled to

be considered'? The problem may be further compounded by the seasonal nature of the residence of many new arrivals. In many cases, the original inhabitants are forced out of the community: by rate and rent increases; by local councils that become dominated by socially and politically astute new arrivals who set certain building standards that exclude, in the extreme case, the hermit-type existence of some original inhabitants; and simply by their own desire to escape from the development in order to find another place where they can regain some of their lost solitude (where doubtless the same process will occur again in a few years' time).

There are often conflicts, especially in locations of tourist potential or ecological value, between the local community (defined as residents living and working in the area for the majority of the year) and other sections of the community such as holiday makers and the broader community that experiences vicarious satisfaction from knowing about an area. Thus, when an ecologically significant old growth forest that was intended to be logged is protected from logging, the local community may experience social impacts in the fonn of job loss, forced migration from their home in search of work, or long-term unemployment, loss of identity and self worth, loss of their sense of their community, etc. But had the logging proceeded, the wider public may have experienced social impacts in the form of lost opportunities for holiday-making or ecotourism to that location, as well having experienced grief at the knowledge of further environmental destruction.

Although not usually considered in SIA, future communities of generations not yet born perhaps ought to be considered as part of the public whose interests ought to be protected. Future communities will suffer social and environmental impacts as the result of present human activities.

SIA cannot deal with these questions, nor should it. These questions are political. The role of SIA is to identify how different sections of the broader community are effected by development projects (and what can be done **to** minimize these impacts). SIA tends, and probably correctly so, to pay more attention to local concerns over the concerns of the broader distant public; but in so doing, SIA practitioners, and local communities must accept that broader concerns may outweigh purely local concerns in the ultimate decision about whether a project or policy ought to proceed.

*What should be the role of community participation in the SIA?*
This question raises many issues about the extent and validity of the knowledge and opinion of local communities, and about the right of local communities to determine their own destinies independent of outside interference. While one might take the view that community involvement is an intrinsic good or right and that community involvement will always lead to an increased knowledge of the project by the community and therefore reduce potential impact caused by uncertainty, there are two situations likely to be of concern in the **SIA** process: one where the public is opposed to the project, yet by independent assessment the project is likely to be beneficial; the other, where the public is in favor of the project, but independent assessment of the project suggests that the social (and/or environmental) problems are likely to outweigh the benefits.

The general community does not necessarily know what the likely effects of development will be. The public may be manipulated by advertising, and may be deceived by promises of economic prosperity. Public support for, or opposition to, a project may simply be a matter of timing, the role of the media and public relations exercises by the developer.

Strong public support for a project does not mean that there will not be any major social impacts, or that a project should necessarily proceed. Independent, non-partisan, expert assessment of likely impacts needs to be undertaken. On the other hand, where the public is opposed to the project, it is possible the public perception of risks associated with a project may be over-inflated, and actual impacts may be slight—except that fear and associated psychosocial stress are themselves major social impacts, although they can be mitigated by careful management, usually through a public involvement process. Research into residents' concerns about nuclear power stations (Travis, Etnier 1983; Brown 1989; Gwin 1990)—and probably other major and different projects, such as high-temperature toxic waste incinerators for intractable waste—indicates that the fear of danger associated with these plants far exceeds the actual probability of the risk involved. However, for everyday risks, such as those associated with the effects of smoking, excessive alcohol consumption, and probability of road accident, the risks are under-perceived. Perception of risk is an emotive issue and does not correlate with the actual risk (expressed as a probability of occurrence).

The other major concern affecting public participation is that the nature of the public participation methodologies used may mean that the view gained

from the so-called participation is not representative of the community. Public meetings, sadly often the only format of public participation that is used, constitute neither participation nor representation. They are not participative because they usually consist of one way information transfer, and they are not representative because only certain groups come to such meetings, and only some individuals representing some of these groups say anything, and almost none of them have any attention paid to them. Other forms of participation do not necessarily guarantee representation either. Invariably, elite or power groups, the very same groups that tend to benefit most from developments, are also the most likely to gain representation through the various avenues that are used to involve the public and certain groups ot people, especially social underclasses, tend to be excluded from public participation exercises.

Public participation, not matter how carefully undertaken with respect to community concerns, is not a substitute for a thorough SIA using appropriately qualified **SIA** professionals, although it remains an essential component of SIA.

### *What impacts are to be considered?*

SIAs are usually undertaken at the behest of a community group, local or regional government, or the developer. Each one of these bodies has vested interests that they are keen to promote or protect. Consequently, the regulatory framework under which SIAs and EIAs are undertaken affects the integrity of the SIA or EIA (Buckley 1991). Where EIA-SIA consultants are engaged directly by developers, with no review procedure other than public comments, the consultants tend only to give a pro-development line, with any negative or critical comments couched in very masked terms. Consequently the impacts that are considered (both perceived as impacts and/or measured) are those that are politically or socially determined at the time the study is done. Many potential impacts are excluded from consideration because they may not be regarded as important at the time. Therefore, unless **SIA is** an ongoing process undertaken by truly independent and professional individuals, all SIA statements will be inadequate. There needs to be a procedure for ensuring that all potential impacts are considered. Adoption and promotion of the understanding contained in the ***Guidelines*** *and Principles* **is** step toward ensuring appropriate and professional SIA practice.

### *How should impacts be weighted?*

Certain impacts, such as changes to the nature or character of a community may be perceived as negative by some members of the community, and as positive by other members. Thus impacts are not simply positive or negative in themselves (such as job growth is positive; job loss is negative), but are subject to the value judgements of individuals. For example, one of the consequences of the siting of a new prison in a rural community might be the movement of previously city-based families of prisoners (that is, wives and children) to that community. Some existing members of the community may view this as a negative experience and may be concerned about the loss of community integration, the changing nature of the community, and may have concerns about their personal safety and the security of their belongings. Other members of the community might believe that the community was too narrow minded to begin with, and therefore the intrusion of new and a largely different type of people might be good for the community because it will lead to a broadening of the mental horizons of the more conservative members of the community. Thus the same consequence of development is both a positive impact and a negative impact depending on the perspective of individuals.

This situation of whether consequences are positive or negative is even more problematic because individuals may change their mind over time. Thus a consequence may be a negative impact for a period, and a positive impact thereafter, or vice-versa. In this situation what should be the position of the **SIA** practitioner?

Other concerns about the weighting of impacts include difficulties for **SIA** about different strengths of feelings different individuals attribute to impacts. Some individuals may regard an impact as a mild unpleasantness or inconvenience, while for other individuals, the same impact may create a major change in life. Many individuals over time will adapt to a new environment, even if the (romanticized) past is reflected on as having been preferable. However, there are certain vulnerable groups, particularly the aged and the socially disadvantaged, who are unlikely to be able to adapt and who bear most of the social impacts. These groups need special attention by **SIA** practitioners.

**SIA** can not judge. It can merely report the how different segments of a community are likely to respond to development projects or policies, and advise on appropriate mitigation mechanisms.

### *Who judges?*

A nation's regulatory framework usually specifies the role of the SIA or EIA in decision making and planning. Although EIAs and SIAs are compulsory in many countries, in most cases they are perfunctory; and regulatory bodies tend not to be bound by the outcomes. In any case, because of the issues outlined above—and cost–benefit analysis and other economic decision-making techniques notwithstanding—SIA cannot, except in very obvious cases, make definitive decisions about whether a given project ought to go ahead or not. **SIA** is not, of course, accorded regulatory power sufficient for this to happen even if it could decide. Decisions are about whether a project should proceed, or what compensation a developer should pay, are ultimately and inherently political. Even in the examples cited as being successes of SIA in stopping a project (the Berger inquiry, Coronation Hill, and the intractable waste incinerator), it could be argued that it was not the SIA study that stopped the project, but other political pressures, with the SIA providing the convenient excuse (Toyne 1994). Consequently, it could be argued that SIA is no better than the normal political process, complete with social and power inequalities that are vested in the political system. However, to the extent that SIA provides information for informed decision making, media commentary, and public discussion, SIAs can do no harm, and have the potential to contribute. It is unlikely, however, that SIAs can change the inherently political process of decision making and planning.

Even in a benevolent political system where SIA was genuinely desired as a decision-making tool, SIA could not deliver a decision-making mechanism. The inherent social inequalities of costs and benefits of projects, will mean that on simple cost benefit analysis, where benefits are greater than costs, projects will proceed even if the same social groups will always be adversely affected. Even if mitigatory action is taken to minimize these impacts or if affected groups are compensated, the compensation probably will not cover the full extent of costs actually experienced. It is also unlikely that any government would have sufficient courage or conviction to enforce full compensation, and no developer would engage in such practices voluntarily. Decisions about projects are ultimately and inevitably political.

## WHAT SIA SHOULD DO TO ADDRESS THE PROBLEMS IT FACES

With acceptance comes expectations—a general cliche that is particularly appropriate for the field of SIA at the present time. With general agreement

within the SIA field on procedures and content, as well as the general conceptual orientation of SIA becoming more widely accepted, attention must now shift to the development of conceptual and methodological issues which will strengthen the field. Two overriding issues are: (1) the application of **SIA** in the larger policy context, and (2) whether SIA can be successfully integrated into the planning and development process to improve projects and planning generally, rather than being seen solely as methodology to provide only a statement of potential impacts to determine whether a project ought, or ought not proceed.

Such a narrow view wastes so much of the potential of SIA because many possible impacts can be easily avoided by simple and cost effective mitigation strategies that can turn development projects with negative social impacts into projects with positive impacts, at least for many members of the community. Such an enlightened approach to SIA has been recognized in certain industries, particularly the mining industry, where through the use of SIA and community development consultants, practical social strategies and social design concepts can have a profound influence on community well-being which flows through to reduced costs and enhanced productivity for the company. Conversely, early mining developments which had no social planning often were social disasters with severe social problems which had, not only social impacts on the workforce and surrounding (often indigenous) populations, but also on productivity through lost work due to sick leave, alcoholism, strikes, and 'slow days'.

SIA needs to address the issue of scale, i.e. how the concepts and procedures of **SIA** can be applied to larger geographical regions than the immediate vicinity of a specific project, such as a large river basin, an ecosystem, or even regional and national political units. Some assessors are even calling for the analysis of global processes, such as the effects of world trade and GATT negotiations on agricultural and rural restructuring in peripheral and semi-peripheral nations (e.g., Lawrence and Vanclay 1994; Vanclay and Lawrence 1995). The social effects of some developments can be extremely dispersed from the original site of the development. This is perhaps best illustrated by the impacts of satellite television on locations which had no previous exposure to outside cultures (see O'Rourke 1980). Social and bio-physical EIAs rely on localized, project level measures to predict impacts. As the scale is expanded, it becomes more difficult to establish significance because larger geo-political units tend to wash out project level impacts. Burdge's (1994b:2) axiom is pertinent:

> The social benefits and consequences of project development, consolidation, and closure (abandonment) always occur, can be measured, and are usually borne at the community and local level—but the rationale for projects and the decisions are justified and sold on the basis of regional and national economic goals.

There are two general approaches to SIA, a generic one and the project level approach. The strengths of each need to be examined. The generic approach to SIA sensitises people to general social change. It assumes the presence of major impacts and a rather wide policy application. Project and policy impacts are seen as leading to radical shifts in the distribution of the population and in turn producing recognizable changes in how human groups relate to each other. Implicit in the generic approach to **SIA is** the notion of understanding social change through experience. Being sensitive to the existence of social impacts is seen as more important than actually being able to identify them. Often the objective of the generic type of SIA is to get the social science point of view across to the non-social scientist.

The project level approach to SIA assumes that social change is ubiquitous, but that a new project or policy change alters the normal flow of social change. Furthermore, this approach stresses that impact events will vary in specificity, intensity, duration, and a variety of other characteristics. It then becomes important to understand what will be the actual social impacts of a particular development rather than only being aware that social change will take place. The researcher or practitioner uses past social science research to better understand what is likely to happen to human populations given different development events.

SIA will be most successful when fully integrated with planning at the appropriate level of jurisdiction where project development or a proposed policy development will occur. When this integration is accomplished, both social and environmental factors become central to planning decisions, rather than being treated as external or peripheral to the planning process. Achieving such integration requires a sound understanding of the nature of planning on the one hand, and how advances in knowledge about impact assessment and its many methodologies can fit into modern planning models on the other. Additionally, functional integration of the key components of the planning process from project inception to post-development monitoring, is an important goal of modern comprehensive planning. This kind of integration is essential because, as a dynamic process, planning requires data collection across time and ongoing revision of plans to ensure that planning

goals are being met (Armour 1990). Similarly, SIA requires successful integration of all phases from scoping to monitoring, mediation to mitigation, as well as continual and cumulative assessment of results.

The methodology for measuring, and the substance of, cumulative effects in SIA need to be researched. Certain cumulative effects are obvious—such as basic infrastructural needs generally provided by local government and utility companies. Infrastructure payments and other financial arrangements can generally satisfactorily compensate existing communities for these impacts. Other, still basic, questions are less obvious, for example, does increased population require an increased size of local government? At what stage should the assessment consider the community infrastructure needs? Finally, and most importantly, there are a whole range of questions relating to cumulative impacts that the SIA process raises that it cannot answer. Communities have a basic resilience and can accept a certain amount of change or impact. Impacts become important when the number or extent of changes exceeds a certain threshold. This threshold is likely to be unknown and unknowable for any community. Very large projects with major social impacts may exceed this threshold, but so may many different small projects. When the SIA procedure is undertaken on a project by project basis, it is very difficult to determine if this threshold will be exceeded, and of course, no specific project was individually responsible for exceeding that threshold, Overall advance planning is required to ensure that the threshold is not exceeded for any community, and to maximize the benefits and minimize the negative impacts for each project.

SIA achieves its greatest benefit to society through its ability to advise on mitigation of impacts. However, not only must mitigation procedures be developed and improved, but appropriate political procedures must be established to determine who is responsible for mitigation and monitoring at each step of a project, not only during construction and operation of projects, but also for the decades and centuries after the project has been abandoned or the policy implemented, especially in the case of projects with long term impacts (such as nuclear waste repositories where the wastes have radioactive half-lives of thousands of years!).

These issues imply both policy and administrative procedures as well as mechanisms to pin point responsibility. **A** well thought out public involvement program is a necessity for the mitigation and monitoring steps of the **SIA** process.

As pointed out earlier, early SIA assessors faced ideological resistance (the asocietal mentality) as well as political and legal obstacles, not only in including SIA within EISs, but also in deciding which variables to use in the analysis. Social variables were often considered suspect. To ensure the presence of a social component in an EIA statement, SIA was changed to socio-economic indicators, and as a result many US federal agencies adopted the term 'socio-economic' impacts. In practice, the social part of the hyphenation was not done and socio-economic became an economic impact assessment, with a concentration on demographic changes and regional multipliers. The linkage persists today and a goal for SIA must be to separate further the social from socio-economic impact assessment, and to enhance the legitimacy of purely social concerns.

The SIA research community needs to publish more widely, making available the really good case studies which point out where SIA actually made a difference in the decision process, not only cases in which the SIA stopped the development, but the cases for which SIA substantially improved it. Now that there are agreed upon methods, long range research on case studies using good SIA practice needs to be undertaken. Well-conceptualized, long-range research projects will provide the legitimacy for the verification of existing—and the identification of new—SIA variables.

SIA needs to be considered in the broader policy context. In the FEMAT project in the Pacific Northwest of the United States (see Clark, Stankey 1994), the researchers could not differentiate between impacts to an individual community and social impacts that occurred over the entire region as a result of proposed alternatives in levels of timber harvesting. The social assessment team was asked to do an SIA for a region without the benefit of data on any one of the impacted communities. Thus a regional data base to study social impacts which are ongoing and cumulative is needed. The FEMAT social scientists had no longitudinal data base (other than census information) as a starting point to measure social impacts. They needed an agreed upon list of SIA variables and the funds to maintain this information over time. As part of the data base problem, the FEMAT exercise highlighted the problems of integrating qualitative and quantitative data. Qualitative SIA indicators are just as valid and in many cases are more insightful and provide a more holistic perspective than quantitative indicators. However qualitative data are more difficult to store on a cumulative basis and are difficult to sell to non-social scientists. Furthermore, both types of social science indicators when used in SIA, are usually in some form of

small area analysis, and consequently face the problem of 'statistical significance'. The FEMAT team of social assessors were repeatedly asked to defend the significance of the social impacts identified in the assessment process and probability levels seemed the only acceptable answer, even though these were impossible to provide (Clark, Stankey 1994).

All types of assessment face the problem of integration. How do EIA and SIA fit together in providing a comprehensive picture of likely project impacts? At present, most SIA statements are stapled to an EIA, and the total recommendations are the sum of the parts. No attempt is made to integrate and interpret the collective findings. This needs to be improved. Higher order impacts are possible. Thus environmental impacts can have social impacts, and social impacts can turn into environmental impacts. Mitigation strategies (both biophysical and social) can also have their own environmental and social impacts which may not be considered in impact statements because impact statements tend not to go past first order impacts.

The relationship between SIA and public involvement needs clarification, especially to managers of agencies and corporations who often confuse them. Public involvement is an important process which goes on throughout the EIA, SIA and planning process, but it does not tell us what social impacts will occur as a result of a policy or future project (Burdge, Robertson 1990).

The broadening of, and increased acceptance of, a cultural understanding of society and social processes may be the most important contribution of SIA to the assessment process. The science and research of EIA assume a logical-positivist model in the analysis and implementation of the planning process. The model is generally reductionist and therefore lacks a holistic approach. It also assumes that all interested and affected parties have the same perspective and goals. In order to be acceptable to the EIA masters, some SIA practitioners have adopted a similar perspective in their approach to social impacts. Such an approach is inadequate in dealing with many of the real social impacts that may arise, that are purely cultural, and that will be identified if such a perspective is adopted.

For example, to many individuals and groups, particularly but not exclusively indigenous peoples, there are many spiritual and religious issues that need to be considered in SIA (Greider, Garkovich 1994). Concepts such as attachment to the land and identification with place are very difficult to quantify and easily discounted in the formal decision process, yet are the most

important factors in determining project success and probable acceptance by local populations (Burdge 1994b; Chase 1990).

One dimension of culture is spirituality. which is profoundly evident in the many indigenous cultures of the world—although anthropologists would argue it applies equally to all cultures, even if it may take on various forms which many people may not recognize as spiritual. The reference to and the use of the 'spiritual' in understanding human interaction with ecosystems is a jolting revelation for decision makers and runs counter to traditional western positivist thought. The alteration of scared ground is a good example. A new airport built in Denver, Colorado (USA) was completed and scheduled to be opened in 1993. However, an automated baggage system could never be perfected and a series of other mechanical failures delayed the opening indefinitely. When the airport was first proposed, the American Indian tribe who lived in the area said the site was on sacred ground and that the 'spirits' would never allow the project to be completed. The natives were right, at least up until the time this paper was published! The SIA for a mining project in Australia (Coronation Hill) revealed a similar story, where if the sacred ground was disturbed, the spirit of Bula would rise up and destroy the world (Lane et al. 1990). In this case, the SIA resulted in a Federal Government decision not to allow mining. Unfortunately, most EIA-SIA statements allude to the importance of culture, but never really admit that cultural history is a key component in the decision process. Again much more legitimacy must be placed on the social and cultural factors of society.

## CONCLUSION

The progress of the field of SIA has been remarkable. There have been some major agreements: a shared definition and understanding of the SIA process; a basic framework; and an outline of what ought to go into an SIA. However, more longitudinal research case studies are needed, particularly to evaluate (audit) past studies and predictions. There is widespread consensus that human or social impacts should be considered as part of the environment. In particular, the SIA process has raised awareness of how projects and policies and political change alter the cultures of indigenous populations. Experience has provided a realistic appraisal of what is likely to happen in the future as a result of particular policies or actions. **SIA** is beginning to be fully integrated into the EIA process, and EIA (and SIA) into the planning process.

Despite the success of the last ten years, the big issue ahead is how project specific knowledge about social, economic and environmental impacts can be used for larger policy assessments. **SIA** has yet to bridge the schism between project level research findings and the larger scale assessments which are needed for regional and national policy decisions.

**SIA** should also be considered an integral part of the development process, not a step or hurdle to be overcome. Done poorly, **SIA** may be nothing more than a public relations exercise for illegitimate development by unscrupulous corporations. **SIA** is not designed to hamper development, but is designed to maximize the potential benefit for all parties associated with the development. For the community this means minimising social impacts on the community and maximising community benefits. For the developer it means minimising social impacts and therefore the costs of rectification of these impacts in the future. Effective **SIA** increases the legitimacy of the development, and may well facilitate the development process. **SIA** removes uncertainty from the process, for both the community and the developer. To a small extent, **SIA** reduces impacts on the workforce and has the potential to increase productivity and reduce disruption.

The effectiveness of **SIA** rests on the integrity of the **SIA** practitioner. Community participation is essential, as is community evaluation of any report or recommendations. However, public participation exercises are not of themselves social impact assessments. Governments should consider appropriate measures to ensure that **SIA** and **EIA** that is undertaken are to a satisfactory standard. Furthermore, it must be accepted that **SIA** can not be an ultimate guide in decision making. Decisions were always and will always, of necessity, be political. Nevertheless, **SIA** can be a useful tool in providing information that will assist in that process.

Predicting the future based on the past is tricky but is what impact assessment is all about. Charlie Wolf's analogy of the binoculars with a lens pointed to the front and another to the back, with a weather vane at the top to give an indication of which way the (political) wind is blowing, is exemplary. Perhaps the analogy should be expanded by attaching a wheel to remind **SIA** practitioners not to reinvent it! The challenge ahead is to make sure that the field of **SIA** can deliver what it promises, and at the same time present a realistic picture of what the field of **SIA** can provide in the planning/decision making process.

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