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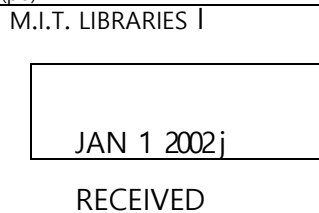
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INTRODUCTION

THE CHARACTER, PRINCIPLES AND AIMS OF SI A

Wise rulers and politicians who wish to prosper have always tried to foresee, and either prevent or prepare for, social and economic impacts.[1] It has been claimed, that as far back as the seventeenth century there were anthropologists and social psychologists doing something like SI A.[2][3] Becker (1997: 23) argued that Johan de Witt conducted what was essentially an SIA in The Netherlands in 1640 and, in France, the Marquis de Condorcet made an assessment of the likely impacts of a proposed canal in the Somme Valley between 1775 and 1776. Condorcet identified enough problems to ensure that the canal was never built; he has also been credited with the concept that social action might be quantifiably analyzed and reliably predicted (Wilson, 1998: 16). Modern SIA is a field that draws on over three decades of theoretical and methodological development to improve foresight of future change and understanding of past developments.

Many books on SIA start by trying to define what is meant by a 'social

A 'social impact' may be defined as an adaptation on the part of a social system to external agents of change and/or endogenous change. Another definition might be 'the social consequences of actions, including change to norms, beliefs, perceptions, values, etc.'. There are many categories of impact, some overlapping others. For example, economic (income, employment, taxes, etc.): demographic: institutional; displacement and relocation; community cohesion (see Glossary); lifestyle or well-being; beliefs; health and so on.

SIA has been used as an abbreviation for 'social impact assessment' since roughly 1970. However within the last decade or so, others have adopted the same acronym. It is now used in medicine (subcutaneous infusion anaesthesia; strip immunoblot assay), chemistry (stepwise isothermal analysis), biochemistry (sialylated antigens; sialic acid), impact assessment (sustainability impact assessment) and a number of other fields (scientific information activity; scientific-industrial associations; Singapore International Airlines).

 * I use the term assessment' rather than 'analysis', 'appraisal' or 'evaluation'. 'Analysis' implies precise, accurate, repeatable results, something SIA does not provide. 'Appraisal' or 'evaluation' have come to mean something different to mainstream SIA

impact' *(see* Glossary); for example, a definition might be: 'a significant or lasting change in people's lives brought about by a given action or actions'.[1] I broadly interpret SIA to be systematic, iterative *(see* Glossary), ideally ex-ante *(see* Glossary), assessment of such changes. There has been a tendency for SIA, like EIA, to stress negative (unwanted) impacts rather than positive ones. Advance warning of any probable impacts can be very useful, so effective SIA should address both negative and positive. Some recognize 'outcomes' as something distinct from 'impacts'. The former are less obvious; for example, a group may undertake a legal action and fail to win or lose much, so there is little impact. However, the group may have gained valuable experience and confidence in the process, and in future may fight much more effectively for its wishes to be heeded - a positive outcome.

The 'roots' of SIA lie, in part, in research carried out since the 1950s by anthropologists and sociologists who feared that proposed developments might have serious negative side-effects; for example, on indigenous peoples (Green, 1986). By the early 1970s it was being argued that if socio-economic impacts could be reliably identified in advance of development they might well be avoided or mitigated.

It is difficult to agree upon a single precise definition of SIA, or a universally accepted list of its aims (some suggestions are offered in Box 1.1). The goal of SIA, many would accept, is that 'it seeks to help individuals, groups, organizations and communities understand possible social, cultural, or economic impacts of change, or better-still impacts of proposed change'. SIA should go beyond anticipating possible impacts to suggest development alternatives to avoid, reduce or mitigate problems and maximize benefits. It can also play a crucial role in shaping ongoing monitoring *(see* Glossary) and evaluation, and may also be a means for public involvement and empowerment, and for improving the accountability of planners and administrators. Certain points recur in definitions and statements of aim, so there are commonly accepted qualities: it is a 'process' for 'systematic' assessment; it is 'anticipatory', it 'aids understanding', 'planning' *(see* Glossary) and (so far, not often enough) 'policy making'; it is 'iterative', i.e. adding depth and detail as it proceeds through its successive stages. Increasingly SIA, and related fields like strategic environmental assessment (SEA), are being explored as aids to achieving sustainable development.

SIA can mean different things to different people. For example, it can be a research technique, often *ad hoc* in approach; or it is applied as a 'technocratic' planning or management tool, seeking to be 'scientific'; or as a policy instrument shaped by agreed laws and frameworks for application (Anon, 1993: 240); others see it as a means of ensuring participation or even the empowerment of people in the development process. There are several ways in which SIA can be interpreted and applied *(see* Chapter 3). Some focus SIA on social systems affected by 'external' forces of change (Shields, 1975), others explore 'internal' factors as a cause of impacts - for example, alterations of perception or aspiration. Sometimes the focus is social, sometimes more socio-economic or socio-cultural. Generally, SIA aims to be multi-

disciplinary or interdisciplinary in approach, using a combination of objective and subjective assessment and ethical judgement, and considering external and internal changes. Those from a science background should note that it has been argued that detached observation alone is not enough if seeking to understand a social context *(see* Glossary).

SIA is often part of the EIA process, and some seek to incorporate it as a subfield (Gismondi, 1997). If EIA and SIA are laid out as a 'spectrum', then there are extremes where each is clearly distinct in terms of approach, methodology and technique, background of practitioners, and literature; however, there is also a great deal of overlap. There is clearer separation in historical terms, EIA and SIA having had reasonably different evolutions, and in respect of legislative and financial support - in which SIA has been more neglected.

Usually the aims of SIA are more practical than theoretical; Burdge (1995:9) observed that it offers opportunities for social scientists to contribute in a meaningful way to solving interdisciplinary problems. Tester and Mykes (1981: 11) recognized three SIA objectives: to inform the public about proposals and their implications; to assemble information from locals; to solicit public opinion on proposals, alternatives, trade-offs, etc. Some feel that 'social assessment' (SA) is a better term than SIA, because it avoids the negative associations of the word 'impact'. In 1998 the National Environmental Policy Act (NEPA) defined SA as: '... an analysis of the community designed to ascertain how the community is organized, how its people relate to one another, how decisions are made, and other factors. These data can help ... anticipate issues and establish effective ways to resolve them. The SA describes current conditions, but, unlike SIA, it does not attempt to forecast outcomes if things change' (NEPA 'call in' internet site, *see* Further reading and resources at the end of this chapter).

A good deal of SIA is applied after a decision has been made to act, so mainly serves to 'stock-take' and clarify what has already happened, although it might also suggest what may take place in the future. Such retrospective SIA adds to hindsight experience and understanding of how change takes place. Although there may be situations where anticipatory (ex-ante) SIA predictions are impossible or impractical (e.g. with complex, rare, random or unexpected events), if it is undertaken before an action or policy is firmly formulated, or at the first sign of some worrying trend, it can greatly benefit decision-making, policy formulation, choice of technology, implementation and management. Adopting an anticipatory but piecemeal approach is not enough, because developments can be complex, can change over a long period, and can affect a wide area. In addition, developments may alter as time progresses, and the people affected are also likely to change attitudes, adapt, acquire and lose abilities, alter their tolerance, etc. Constantly changing external factors may also impinge. Therefore, in addition to being anticipatory, SIA should be systematic, ongoing (seeking more than a single temporarily and spatially limited 'snapshot' view) and adaptive (Geisler, 1993: 332; Holling, 1978).

Box I. I Selected definitions and aims of **SIA**

- The process of assessing or estimating in advance the social consequences that are likely to follow from specific policy actions or project development.
- The definition offered by the Inter-organizational Committee on Guidelines and

  Principles for Social Impact Assessment:... efforts to assess or estimate, *in advance*, the social consequences that are likely to follow from specific policy actions (including programs, and the adoption of new policies), and specific government actions (including buildings, large projects, and leasing large tracts of land for resource exploitation).. .' (Burdge *et al.*, 1995: 12).
- Describe and analyse the real or potential effects of proposed developments upon specific groups of people.
- The goal is to balance science and politics in policy formulation and implementation (Rickson *et al*, 1990: 9).
- SIA aims to help structure development so it responds to people's needs and is compatible with sociological conditions.
- The identification, analysis and evaluation of the social impacts resulting from a particular event. A social impact being a significant improvement or deterioration in people's well-being or a significant change in an aspect of community concern (Dietz, 1987: 54).
- The purpose of SIA is to answer the following question: 'Will there be a measurable difference in the quality of life in the community as a result of the proposed action?'
- The practical goal of SIA is to anticipate likely impacts and utilize the information in the planning process, and thereby ensure appropriate mitigation.
- The process of assessing or estimating in advance, the social consequences that are likely to follow from specific policy actions, project development, environmental impacts, commerce, altered tastes, media activity, social movements, etc.
- The systematic analysis in advance of the likely impacts a development or event will have on the everyday life of persons and communities.
- The process of identifying the future consequences of a current or proposed action which are related to individuals, organizations and social macro-systems.
- A method of policy analysis that offers great potential for integrating scientific policy analysis into a democratic political process (Dietz, 1987: 54).
- Efforts to identify, assess and summarize significance of the full range of effects/consequences that may result from some future development (the development being a new project, policy, environmental change, social change, etc).
- A process examining proposed projects, programmes and policies for their possible effects on individuals, groups and communities (Buchan and Rivers, 1990: 97).
- Prediction and evaluation of the social effects of a policy, programme or project while it is in the planning stage - before the effects have occurred (Wolf, 1980: 27).
- Analysis of past and present impingements upon social conditions and processes and a projection of likely future consequences of proposed interventions (Burdge, 1994: 78).

- A systematic assessment of social and cultural impacts for a proposed development.

Note: most of these definitions are paraphrased, rather than direct quotations.

A given impact, or combination of impacts is likely to affect various social, ethnic, gender or age groups differently, though perhaps not simultaneously (these are known as 'differential impacts'). A given impact might quickly advantage one group, slowly damage another and leave others unaffected. There may also be difficulties defining social units that may not be fixed. Finsterbusch (1995: 230) noted that '... Weber (in the late 1950s] attributed the rise of capitalism in the West to the impacts of Calvinistic Protestantism. Most of us sociologists, if we had done an SIA at the time, would have missed these impacts.' These difficulties tend to prompt an issues-oriented approach that tries to explore off-site or downstream impacts, indirect impacts and cumulative impacts *(see* Chapter 5).

SIA needs to be 'continuous', or at least repeated regularly, with ex-ante (anticipatory or proactive) blending into ex-post (retrospective or reactive) *see* Glossary) assessment; possibly as a sort of life-cycle approach that considers impacts at planning, implementation, function, decommissioning and rehabilitation stages, or at succeeding stages in a project, programme, or policy *(see* Glossary for definitions of 'project', 'programme' and 'policy), or during social change (Ellis, 1989; Geisler, 1993). Many practitioners would agree that the goal of SIA is to monitor and predict changes in quality of life, although it is difficult to make precise, quantifiable, reliable forecasts of such complex scenarios.

Some have tried hard to ensure that SIA deals with quantifiable data, perhaps to gain better acceptance from engineers and other non-social studies specialists who may fail to appreciate the value of qualitative data, and who might otherwise dismiss it as 'soft science'. These efforts can end up obscuring useful observations and usually hide the way in which assessments have been arrived at; they may also waste time and money for little real gain in objectivity or precision. It is best to accept that SIA is as much an art as a science, and that it relies a great deal on the professional judgement of researchers, so that qualitative measurements are useful. Torgerson made a careful examination of the character of SIA, concluding that it was not a science, but a 'social process', which itself has social impacts (1980: 2). (For discussion of SIA as a 'social phenomenon' and the impacts it can itself cause, *see* Chapter 5.)

Increasingly, EIA is being called upon to advise those seeking sustainable development, but it is not enough to assess physical impacts, one must also consider the social, cultural and socio-economic issues that are interrelated with them, and that control exploitation (Harrop and Nixon, 1999). SIA can provide information on social institutions, social capital and social change which may have huge importance in determining whether sustainable development happens in practice. The value of SIA for those seeking sustainable development and social development is discussed in Chapter 2. O'Riordan (1976) suggested that EIA comprised 'value judgements of a policy-making kind superimposed on the findings of pure scientists'; the same thing may be said of SIA, only more so. Some SIA may be quite objective, but it is wise to bear in mind that it is seldom wholly free from

pressures, and is often part of political manoeuvring. Special interest group* may use SIA to legitimize and support their own wishes unless care is taker to ensure it is independent (Rickson *et al.,* 1990).

While a 'core' of SIA remains distinct, there is much overlap with other impact assessment fields. SIA has drawn a good deal on environmental sociology (Dunlap and Catton, 1979), human ecology, social evaluation, studies of social indicators *(see* Glossary), and other social science fields; however, as Freudenburg (1986: 463) observed, it is'... not merely an area of empirical social science; it also draws from and contributes to the policymaking process'.

SIA, it must be stressed, is still evolving theoretically and in its practice. Critics argue that:

- it still needs more conceptual development
- it is desirable it be better integrated with EIA, technology assessment and other impact assessment fields
- it must better relate with recent social theory and research
- practitioners must understand what happens to knowledge in the political process of applying it to development if SIA is to improve
- there is a need to better apply SIA to programme and policy levels of decision-making and planning.

The relationship between SIA and other impact assessment fields, notably EIA, has been rather uncertain *(see* Figure 1.1). Some have seen it as an integral component of EIA, others hold it to be a separate process (Kirkpatrick and Lee, 1997:7). SIA has developed more slowly than EIA and, even though the stated policy in the USA and elsewhere is to integrate the two, this has often not been effective. A late-1980s study of environmental impact statements (EISs) - the 'results' of impact assessments in the USA - revealed that many had little, if any, 'social' component (Culhane *et al.,* 1987). SIAs worldwide have often been of poor quality and have had little impact on project, programme or policy decision-making. This is due to a variety of reasons, including: uncertainty in some countries about its legal status; problems comparing results because of a plethora of methodologies; and the ability of special interest groups to manipulate findings and to side-line what they do not agree with. SIA has also been slow to make use of what is known about community *(see* Glossary) and cultural change. Freudenburg (1986: 452) felt that SIA tended to focus on the consequences of technical change and environmental change and should widen its coverage.

Some authorities seek to combine social and economic impact assessment (SEIA); however, this is not a common approach. NEPA argues that the two are distinct *(see* http://www.gsa.gov/pbs/pt/call-in/factshet/1098b/10_98b_3. htm (May, 2000). More widespread at present is a tendency to integrate SIA with EIA, usually with SIA in a 'minor' and EIA a 'major' role. This is more likely with policy-makers and those concerned with legislation.

Well-established and expanding fields - evaluation research, social evaluation, or evaluation - focus on projects programmes and policies (Gosling
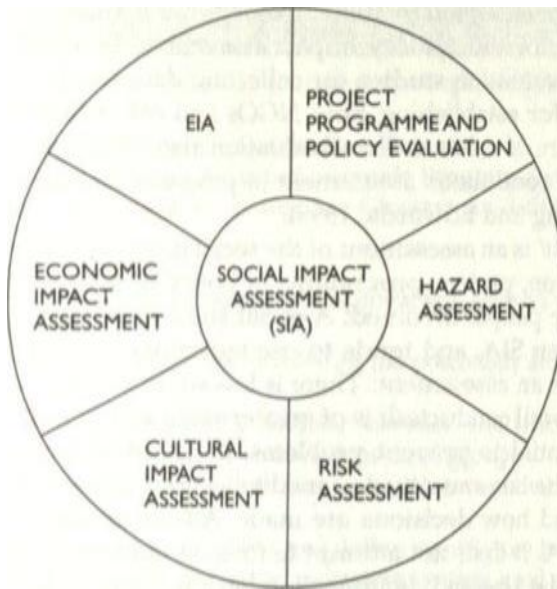
FIGURE I. I The relationship of S1A with other impact assessment fields Although the 'core' of SIA is relatively discrete, it overlaps other impact assessment fields and evaluation studies, sharing techniques, expertise, literature and so on. The segments are drawn as discrete fields, but most overlap with some, if not all, other fields. Some fields are not included in Figure 1.1 through lack of space - for example: technology assessment; strategic environmental assessment; social soundness analysis; social assessment; futures studies; and monitoring.

and Edwards, 1995). There is a tendency for evaluation practitioners to talk of conducting 'impact assessment'; however, this is seldom the structured, anticipatory and iterative process recognized by most impact assessors. Evaluation, like SIA, may cover economic, social, cultural, psychological and other social studies fields, but the end product is usually a report to the commissioning body (rather than an SIA-type impact statement). Project appraisal is another well-established allied field, and one in which a large number of non-governmental organizations (NGOs) and consultants are active (Fernandes, 1990; Lee, 1996). Evaluation and project, programme or policy appraisal can be said to deal with 'existing' projects, programmes and policies, assessing expected and intentional change, often checking to see whether goals have been accomplished and are being maintained; whereas SIA is more concerned with predicting the unexpected impacts of 'proposed' developments. Evaluation is thus more retrospective (post-development studies), concerned with taking stock of the situation after something has been set in motion; and SIA is, ideally, anticipatory (pre-development studies). A glance through any of the periodicals devoted to project, programme or policy evaluation or appraisal reveals the use of many techniques familiar to

the SIA practitioner, although some, like log-frame analysis *(see* Chapter 6) are of less value for anticipatory impact assessment. Some of the techniques developed by evaluation studies for collecting data on difficult-to-measure processes, and for establishing how NGOs and other bodies network and communicate, are of value to SIA. Evaluation also overlaps with monitoring (systematic and continuous assessment of progress), which also interrelates with SIA (Gosling and Edwards, 1995).

A 'social audit' is an assessment of the social impact and ethical behaviour of an organization, project, programme or policy in relation to its objectives and those of the people involved. A social audit has more in common with eco-auditing than SIA, and tends to use indicators proposed by the stakeholders to make an assessment. There is less stress on forecasting than with SIA. So, SIA (if well conducted) is of greater value as a planning tool, because it has the potential to prevent problems. A 'social assessment' (SA) is an assessment of the community, designed to ascertain how its people relate to one another, and how decisions are made. An SA describes current conditions; unlike SIA, it does not attempt to forecast outcomes and impacts.

SIA, it must be stressed, is imperfect; even if it accurately predicts many direct impacts it may miss others, together with some (or even all) indirect and cumulative effects *(see* Chapter 5). There is thus a risk that those unfamiliar with SIA may be given a false sense of security. It should be noted that there may be situations where the application of SIA (and El A) can have positive and negative impacts, changing how people react, triggering speculation, etc.

The weaknesses of SIA may not be as serious as they first appear, Burdge (1995: 5) argued that being sensitive to social impacts is as important (perhaps more important) than being able to identify them precisely. A less than detailed and accurate SIA may, then, be useful. Improved accuracy of assessment is a goal, but so must be the ability to get the findings accepted and acted upon by decision-makers and planners. Half-hearted SIA must not be allowed to placate decision-makers, official watchdogs or the public.

The principles of **SIA**

Between the early 1970s and 1995 there was little uniformity in approach or methodology. Proposals from the Interorganizational Committee on Guidelines and Principles for Social Impact Assessment have helped shape and guide SIA since the mid-1990s (Burdge *et al.,* 1995). Seebohm (1997) provided a precis of those principles *(see* Box 1.2), however he was critical of some, and noted that they contain contradictions (in particular, points 9 and 6). In the USA guidelines and principles for SIA currently adopted by the government are based on those of the Interorganizational Committee on Guidelines and Principles for Social Impact Assessment. These have been published on the internet *(see* Box 1.3), and should be consulted by anyone seriously interested in SIA.

Box 1.2 Aims of **SI A**

1. Identify the main features of the proposed development project, programme, policy, or whatever.
2. Identify the types and numbers of people involved.
3. Identify data sources: use published scientific literature, secondary data and primary data from the affected area *(see* Glossary for definitions of primary
   and secondary data).
4. Plan for gaps in the data.
5. Identify the impacts the proposed development will have on various segments of the population.
6. Involve the public: identify and involve all the potentially affected groups and
   individuals.
7. Analyse impact equity: identify who are 'winners' and who are 'losers', and emphasize the vulnerability of under-represented groups.
8. Focus the assessment: deal with the issues and concerns that really count, not those that are easy to handle.
9. Identify methods and assumptions and define significance in advance: define how the SIA was conducted, what assumptions were used and how significance was selected.
10. Provide feedback on social impacts to project planners and identify problems that can be solved with changes to the proposed action or alternatives.
11. Establish monitoring and mitigation programmes: manage uncertainty by monitoring and mitigating adverse impacts.
12. Make development more socially sound.

Source: various (including Seebohm, 1997: Figure 1, p. 239)

The history of **SIA**

Attempts to appraise the existing and possible future social consequences of development and change are not new. Some argue that SIA is a part of policy analysis and has in large part (conceptually) evolved independently of EIA (Dietz, 1987: 54). Although there had been studies of the social impacts of development and change before the 1969 National Environmental Policy Act (NEPA) was passed by the US Congress in January 1970, virtually all were retrospective and mostly *ad hoc* (Colson, 1971; Cottrell, 1951; Sharp, 1952). The expression 'social impact assessment' (and its abbreviation SIA) seem to have first appeared in 1973 (Burdge, 1995: 14) during discussions on the Trans-Alaska (oil) Pipeline. NEPA was clearly an important catalyst.[4] A

NEPA called upon US federal agencies to ensure that, before any activity 'likely to significantly affect the quality of the human environment', a balanced, interdisciplinary and publicly available assessment of the likely impacts be undertaken. NEPA does not require assessment to make a 'best decision' or to veto development, it does, however, insist that identified impacts and available development options be disclosed to the public, and that the EIS be considered by policy-makers. It should also be noted that of the four and a half pages of NEPA. only one half page discusses impacts on people, the rest focuses on environmental impacts (Burdge. 1994: 65). The relevant section

2

THE VALUE OF SIA

The obvious values of SIA are:

■ it can predict the likely negative (unwanted) impacts of a proposed development in time to allow these to be avoided or mitigated
■ it helps to ensure that positive impacts (benefits and opportunities) are not missed or under-exploited
■ it discloses the impacts of previous developments, so that any information already gleaned can be collected and fed into future planning, or used to assist current conflict mediation. SIA has other values too. One of these is as a research tool that can disclose how and why social change takes place and what the future pattern might be. However, it is not a perfect tool; one of its disadvantages is that it is difficult to repeat a study and get reasonably comparable results; another is that it can provide misleading or imprecise findings (Meidinger and Schnaiberg, 1980).

It is easy to be over-critical of SIA; it seeks to do a very difficult thing - predict social change - and, as Wildavsky noted (1996: *xxxv*), '... social change is one of the least understood subjects of all time'. It must also be stressed that SIA alone should not determine whether development proceeds; such decisions must be the responsibility of planners, decisionmakers and, perhaps, the public. The role of SIA is to 'advise' and 'inform'; it should show the likely risks, benefits and development options available; also, like EIA, it must flag potentially irreversible and dangerous impacts.

In general, western society *(see* Glossary) has social control mechanisms that are weak - SIA has the potential to warn of what is needed sufficiently in advance for effective arrangements to be made. Through processes like SIA, planners and decision-makers can be better informed and perhaps made more accountable, thus improving their contributions. Recently, and not without some controversy, social scientists have claimed that, not only can they improve public involvement in ecosystem management, they can also make it possible to integrate social considerations with natural sciences in order to arrive at a better understanding of ecosystems than would other-

wise be possible **(Endter-Wada** *ct ai,* **1998; Force and Machlis, 1997). (Box 2.1** lists some of the **arguments** put forward **in support of SIA.)**

Whatever the arguments **in** its **support, SIA cannot be justified if its costs** outweigh the value achieved through it, **nor if the results are too unreliable.** Burdge (1995: 48-51), arguing the case **for SIA, listed a number of 'myths'** about it. These include:

- ■ doing SIA adds to the cost of development
- ■ doing SIA slows development
- ■ SIA costs more than it is worth
- ■ social impacts are usually obvious, **so common sense should show them,** making SIA unnecessary
- ■ if impacts cannot accurately be **measured, they should be ignored.**

These points are often raised **by** critics, **but seem largely unfounded.**

Since the 1950s there have been **calls for business, development planning** and governments to carry out social audits, **the aim being to obtain an over**sight and review of social performance **(Bauer and Fenn, 1973; Blum, 1958;** Clark, 1977,1 lumble, 1973). Stxi.il auditing **may be defined as periodic exam**ination by independent experts to evaluate **the performance of a body or** business from the stx'ial point of view **(looking at, for instance, the impacts** of wages policy, products, research and **development, employment practices** and advertising). In the past these exercises **have often been more like public** opinion surveys than proper audits or **assessments; in recent years, however,** techniques and approaches have **been much improved. Social auditing and** social accounting are at present largely **retrospective, whereas SIA seeks to be** predictive. It should be noted that **eco-auditing is spreading, and might lay a** firmer foundation for the spread **of social-auditing and SIA. There is a good**

Box 2.1 Types of argument put forward
IN SUPPORT OF **SIA**

- Utilitarian - SIA can help ensure the greatest good for the greatest number, by increasing the chance of benefits and reducing the likelihood of avoidable costs. It can be used to focus and improve the provision of social services, make technological innovation **more** effective, and reduce the negative impacts of policies, programmes and projects.
- justice - SIA helps show what w ill happen, or is happening, and thus aids judgement of a situation.
- Functionalism - SIA helps to ensure that a development works effectively.
- Democratic decision-making - In a democracy all parties, at least in theory, should share knowledge; SIA facilitates this sharing, helping to inform public and other groups.
- Ethical pluralism - To decide the best development path, all likely impacts need
  to be weighed.

Source: based on Finsterbusch, 1995: 234-5

deal of overlap between cost-benefit analysis (CBA) and SIA. CBA is, to some extent, predictive like SIA. CBA also has a strong methodological framework, prompting some to question whether SIA has much to offer that cannot be provided by CBA. In an effort to focus CBA on social issues, the field of social cost-benefit analysis (SCBA) has been developed. This still adopts a more economics-focused approach than does SIA.

The value of **SIA** in social development _____ _j

Social development has been defined as '... the incorporation of a people oriented focus into general development efforts' (Marsden *et al*., 1994: 10). One field in which SIA is likely to be of particular value is the formulation of sustainable development strategies (Hennings, 1996; Seley and Wolpert, 1985). Without supportive social development, sustainable development is unlikely.

Much of the evaluation of efforts to improve social development has been rather retrospective, adopting the approach of 'seeking to learn from experience' and tending to be introspective. Some social development practitioners are critical of SIA, probably through their misconception of what it is (Marsden and Oakley, 1990; Marsden *et al.,* 1998; ODA, 1993).

The value of **SIA** in policy-making and planning

Policy analysis may be defined as 'analysing public policies to see what went wrong, to learn how to do better' (Wildavsky, 1996: *xxix).* But it has not been good at developing improved and appropriate practices. SIA has the potential to introduce forward-looking and objective assessment. SIA may also be valuable for mediation and conflict management (Manring *et al.,* 1990).

SIA is vulnerable to the criticism that it misses some impacts, is inaccurate and is often applied too late. It has also been attacked for being undertaken by 'outsiders' who do not adequately know the people with whom they are dealing. Some - perhaps most - of the faults of SIA are the result of misuse or careless application, rather than any fault with the concept itself. Burdge (1995: 5) observed that SIA can have a valuable catalytic and oversight role, to help make planning and administration more anticipatory and answer- able to the public. It is possible that SIA will show better alternatives, perhaps cheaper and more effective than those that might otherwise be implemented. If it reduces impacts, it should cut development costs (including ongoing insurance charges) and can also suggest contingency measures.

So far, SIA has mainly been applied at project level, i.e. with a site-specific and limited time span focus. Until recently, widespread uncertainty, paucity of reliable data and lack of knowledge, meant that assessors found it easier to cope with small-scale and short-term issues (Wildavsky, 1996: *xxix).*

 access to decision-making has become the norm. SIA is a complex process, prone to be mis-applied, poorly conducted, under-supported and at least partly ignored. In addition, satisfactory interdisciplinary or multidisciplinary approaches can be difficult to achieve (Rickson *et al,* 1990).

P[1] 2 3 4 5 6 7

Box 3.1 Characteristics of the **SIA** process _____
- A systematic effort to identify, analyse and evaluate the social impacts of a proposed project or other change affecting individuals and sodal groups within a community, or on an entire community, in advance of the decision-making process, in order that the information derived from the SIA can actually influence decisions.
- A means for developing alternatives to the proposed course of action, and of determining the full range of consequences for each alternative.
- A means of increasing knowledge on the part of the developer and the impacted community/communities.
- A means of raising consciousness and the level of understanding of the community, and a way of placing the affected people in a better position to understand the broader implications of the proposals.
- The SIA should include within it a process to mitigate or avoid the impacts likely to occur if development goes ahead.

Source (with modifications): Burdgeand Robertson, 1990

_____

1 formulation of alternatives
2 profiling
3 projection
4 assessment
5 evaluation
6 mitigation (if needed)
7 ongoing monitoring.

(See Box 3.2 for more details of these steps, and also Figure 6.1.)

   Project and programme development has phases which are, typically, as follows: (a) initiation or construction; (b) stable, ongoing management; (c) adjustment(s); (d) closedown; (e) replacement or rehabilitation. Ideally, SIA should be repeated for each of these, and because the impacts are likely to differ in type and intensity at each phase, assessment methods will probably

Box 3.2 Typical stages in the **SIA** process

(See also Chapter 6, Box 6.1.)

1. Scoping: the assessor(s) identify the potentially impacted people(s)/society(ies) and their concerns, in an attempt to determine the type, scale and focus of assessment. Identification of the actors. The limits of assessment and terms of reference are decided with reference to available expertise, funding and time available. Methods are decided, key informants identified, sources of data suggested. Decision made on what indicators to study. Community needs and aspirations are determined.[1]

2. Formulation of alternatives: develop reasonable alternatives to the proposal, based on the needs of the community(ies)/society(ies) and their attitudes, etc. A wide range of techniques may be used at this stage: public meetings, questionnaires, advisory groups, public data sources and so on.

3. Profiling: determination of what is likely to be impacted. Describe the social units affected. Identify the indicators to measure. Establish the current social condition; a 'social profile' (see Glossary) is likely to be drawn up - this provides a measure of the social characteristics of an area prior to the start of a proposed development. As in EIA, establishment of baseline data (see Glossary) is necessary - i.e. determining what the current conditions and trends are (what would happen if the proposed development did not take place) - and social profiling helps to do this. Methods are tested and data collected.

4. Projection: using information gathered, the assessor(s) makes projections of what is likely to happen and who is affected - without the proposed development proceeding, if it proceeds or if alternatives are adopted. Identify indicators to study; identify cause-effect linkages and feedbacks (*see* Glossary). The scenarios identified can suggest avoidance and mitigation measures, and help to develop ongoing monitoring.

5. Assessment: the assessor(s) tries to determine the magnitude of impacts, what effect likely changes will have, what impacts are most significant and how people will react. Determine potential for avoidance or mitigation.

6. Evaluation: an analysis of trade-offs. What are the net benefits? Who benefits? Who loses out? Is the overall impact acceptable? Advisory groups and community discussions may help (feedback from affected people is sought). The preferable development alternative(s) are identified. At this stage the evaluation may be presented as a public document or report to decision-makers, often as part of, or alongside, an environmental impact statement (EIS).

7. Mitigation: measures to counter unwanted impacts are identified.

8. Monitoring: measurement of actual impacts (which can be compared with predicted impacts) via observation. Lessons learnt can be fed back into policymaking and planning. Develop plan for ongoing monitoring to warn of any need for further action.

9. Ex-post audit: with out this check on the effectiveness and cost of SIA, methods are likely to be slow to improve, and sceptics may not be convinced of its value.

Some would add an extra stage here, before Step 1: 'problem identification'. Some would add in a stage there, between step 3 and step 4 on analysis, see chapter on discussion of SWOT analysis.

Source: various, including Burdge and Robertson, 1990

need to vary from phase to phase. Carley (1986) asked whether SIA should make as much effort to look ahead at later phases, or be restricted more to observing and acting as watchdog? There is a tendency for decision-makers to conduct EIA and SIA only after phase (b); yet, social impacts start on the day a development is proposed.

For physical developments, early phases often entail vegetation clearance, earth movement, river flow modification and so on, along with the arrival of a team of construction workers (perhaps with relatives and camp followers). For media developments, healthcare innovations, tax changes and legislative changes there will be little or no physical disruption, at least at first, but social and economic impacts soon occur and a complex cascade of further social, economic and physical impacts may be triggered. Impacts may be propagated at any phase, merely by the introduction of new information or the circulation of rumours.

What is often forgotten is that, even when a project, programme or policy is well established, any shift in management, social or environmental conditions can trigger impacts. As soon as closedown of an established activity is announced, there are likely to be impacts, as employees and the local community fear job losses or the risk of pollution from abandoned facilities. Communities that have adapted to a development that, in due course, ceases can seldom return to their original activity and may find it difficult to develop an alternative. For example, fishermen may become oil field workers, sell their boats and lose the skills of fishing; should the oil become exhausted, the ex-fishermen are unlikely to return to their old livelihood. Where a settlement owes its identity and pride to a single company or group of companies there can be serious loss of community cohesion and confidence if there is recession and closure.

Finsterbusch (1985: 194) noted that a series of related questions are addressed in SIA (this holds true for SIA that is focused on projects, programmes, policies and technological innovation).

- ■ Problem identification: 'What is the problem?'
- ■ Policy development: 'What should be done?'
- ■ Impact assessment: 'Which alternative is best?'
- a Response: 'Avoidance, mitigation or adaptation?'

SIA should help shape monitoring, which may take different forms *(see* Carley, 1986):

- ■ to give feedback on the success of any action taken
- ■ periodic inspection for a stated purpose
- ■ periodic checks to see if things comply with a permit or licence that states demands
- ■ experimental monitoring to check a society or environment, and to recognize unexpected impacts
- ■ repetitive monitoring of specific things to detect change
- • performance monitoring to check if a target has been met

■ monitoring to determine whether a development has been a success/ remains a success

■ monitoring for cumulative impacts *(see* Chapter 5 for a discussion of cumulative impacts).

For strategic planning, ongoing monitoring is vital (Bankes and Thompson, 1980). Programme evaluation and monitoring (performance auditing) generally implies an evaluation by a team of government, independent or company assessors - in practice the focus tends to be mainly on whether goals have been met within projected costs. For effective evaluation or monitoring, there is a need for a clear conceptual framework and supportive institutions.

The legal framework

Legislation, in the form of the 1969 US National Environmental Policy Act (discussed in Chapter 1), helped establish SI A. Several court cases were initiated in North America in the decade following 1970, when local people, ethnic groups or non-governmental agencies felt the required degree of multidisciplinary impact assessment, i.e. covering social as effectively as physical impacts, was absent. There is still a need for more legislation in most countries to support SIA (Boggs, 1994). (For further discussion of SIA and the law *see* Chapter 4.)

Anon. (1993) Social impact assessment of investment/acquisition of technology projects in developing countries, with particular reference to the position of women. *Public Enterprise* 13(3-4), 239-56.

Armour, A. (1984) Teaching SIA in times of transition. *Impact Assessment Bulletin* 3(2), 19-26.

Banks, E.P. (1990) Ethnography: an essential tool for impact prediction. *Impact Assessment Bulletin* 8(4), 19-30.

Bankes, N. and Thompson, A.R. (1980) *Monitoring for Impact Assessment and Management.* Westwater Research Centre, Vancouver.

Becker, H.A. (1996) *Social Impact Assessment: method and experience in Europe, North America and the developing world.* University College London Press, London.

Boggs, J.P. (1994) Planning and the law of social impact assessment. *Human Organization* 53(2), 167-74.

Bowles, R.T. (1981) *Social Impact Assessment in Small Communities.* Butterworths, Toronto.

Burdge, Rj. (1984) Teaching social impact assessment at the college level. *Environmental Impact Assessment Review* 3(2), 48-55.

Burdge, RJ. (1995) *A Community Guide to Social Impact Assessment.* Social Ecology Press, Middleton (WI).

Burdge, RJ. and Robertson, R.A. (1990) Social impact assessment and the public involvement process. *Environmental Impact Assessment Review* 10(1), 81-90.

are taken as proof of cause-effect. For example, rising unemployment may be blamed for increasing crime rates, yet causal links may not have been proved. In the same way, social indicator trends may be an unreliable means of forecasting: things may suddenly shift and even reverse.

The quest for quantitative, rather than qualitative, data may cost more and slow down SI A to little real advantage (Lawrence, 1993; Patton, 1987). Both quantitative and qualitative measurements are valuable and may be mutually supportive. There are, of course, situations where non-quantifiable factors such as psychological trauma, stress, degradation of aesthetic features and deterioration of community cohesion have somehow to be quantified and accorded value. Law courts, compensation boards, governments and the like ultimately have to decide on a compensation sum for such impacts. In EIA complex weighting techniques have been tried, but have been criticized for furnishing 'pseudo-quantification' at the cost of loss of transparency of technique (it can be difficult for the EIA user to see whether there has been careless or skilful distortion of data).

There is a real risk that an SIA will allocate too much importance to 'measurable' (i.e. quantifiable) variables and not enough to less easily measured, but crucial, variables. This seems to have been the case with economic impacts which, being easier to quantify than social impacts, may come to dominate SI As (Leistritz and Murdock, 1981). Many, including Dietz (1987), have warned of the risk of hiding value judgements in a less than transparent evaluative process. There have been cases where SIA has embarked on statistically dubious combinations of incommensurable variables to obtain single 'summary' values, or the production of weighted selected variables. The question of whether to weight selected SIA variables or treat them as being all of the same importance should be judged carefully, and it must be made clear to those viewing the SIA results.

METHODS

Methods and techniques for SIA began to be developed in the 1970s (*see* Becker, 1997; Finsterbusch and Wolf, 1981; Leistritz and Murdock, 1981; Llewellyn *et ai,* 1983; Rickson *et «/,* 1990; Soderstrom, 1981; Wolf, 1983). Although subsequently, and particularly since the mid-1980s, those conducting SIA have reviewed their methodologies, assessments are still often conducted in an *ad hoc* manner. There will almost certainly never be an accepted standardized overall methodology (Wildman, 1990). Finsterbusch (1985: 199) felt that, although there were methodological differences, in general these were 'variations on the same theme'. Publication of *Guidelines and Principles for Social Imfiact Assessment* (Inter-organizational Committee on Guidelines and Principles, 1994) has helped to improve standardization (Finsterbusch, 1995), and the more methods are standardized, rather than *ad hoc,* the easier it is to make comparisons between different SIAs. Improved

comparability of results helps future assessments and the disclosure of cumulative impacts.

The goal of many SIAs is the projection of likely socio-economic impacts generated by developments already well into the planning stage or even under way. This leaves little time for in-depth research, and is a particular problem where new and unknown technology is involved, and where people's reactions are uncertain. A range of techniques for assessing current, and projecting future, perspectives and attitudes has been developed by the sorial sciences, psychology and market research (Burningham, 1995; Dale and Lane, 1994; Meissen and Cipriani, 1984). Nevertheless, even simple assessments of the number of people likely to be affected by a relatively straightforward development can be problematic: a few years ago planners suggested that the Three Gorges Dam in China would dislocate about 1.5 million; more recent projections suggest that the figure is more likely to be over 3 million. Even something as relatively 'easy' as determining how many people may migrate to or from an area presents a challenge because assessment must take account of shifting attitudes and opportunities.

A commonly adopted SIA methodology starts by trying to describe the current situation and then attempts to project future conditions, as they would be with and without the proposed development. This is the sort of process published by the Inter-organizational Committee on Guidelines and Principles (which has 10 generic steps). Most professionals would now add that SIA should go on to help establish monitoring and management regimes (see Box 6.1 and also Box 3.2).

Although each case is unique, when an SIA is relatively simple, straightforward and can relate to a reasonable amount of hindsight experience, it is possible for the assessors to make progress quickly and cheaply, relying a good deal on desk research and using available data sources. All SIA starts with the use of available information to assist scoping, but for complex, large and novel applications, specialist expert study will be needed. It is important that methods help ensure the approach is systematic so that as little as possible is missed and there is no undue bias. In the real world, available time, funding, expertise and official commitment to SIA determine how thorough assessment can be.

Some assessment is little more than the use of common sense; for example, by checking the characteristics of the workforce likely to be recruited for a development, a good deal of information on likely impacts is gathered, showing whether they will move on after construction or settle, whether they will come into conflict with locals, what diseases they might transmit to the development area and so on.

TECHNIQUES

A wide range of forecasting techniques is outlined in brief in this section. They are but a fraction of what is need for SIA, for once an impact or scenario

BOX **6.1 A** GENERAL METHODOLOGY FOR **SIA**

(See also Chapter 3, Box 3.2.)

Steps	Analytical operations/activity
1. Scoping	Set level(s) of assessment (policy/programme pro ject); establish TOR; boundaries of study; time-frame for completion/repetition of assessment; budget; team, etc. Public participation is increasingly seen as a vital component needed to provide data and to ensure that people are involved in decision-making.
	2. Problem identification Formulate goals; identify impacted social groups/
	stakeholders; establish their concerns; carry out a needs assessment; determine what to evaluate and
3. Establish alternatives	how.
	Identify 'reasonable' alternatives and gather information about them, having examined the concerns disclosed by Step 2. During evaluation (Step 7) likely direct, and if possible indirect and cumulative, impacts can be factored in.
4. Profiling	Determine who is affected; 'tune' measurement techniques; take measurements and compile social profile. This is the step that describes the social units affected by the proposed development.
5. Projection	Try to establish what effect the impacts will have; assess what will happen with or without development.*
6. Assessment	Present significant impacts; relate to development alternatives. Assess how those impacted will respond (this is often a step that is neglected).
7. Evaluation	Re-check the impacted group's concerns and needs; study trade-offs and try to rank development alternatives. Seek to identify the best option. It is at this stage that attempts to establish indirect and cumulative impacts are most likely to be effective.
8. Mitigation	Identify possible mitigation/avoidance/adaptation measures and assess their likely impacts. SIA can be an important tool for mediation.
9. Monitoring	Establish/advise on ongoing monitoring; decide when and how to conduct next SIA; check how accurate this SIA has been.
10.	Devise management plan; adjust procedures, review objectives, etc.
Management	*Note:* the ten steps listed here are based on, but do not quite match those proposed by the Inter-organizational Committee on Guidelines and

Principles (1994), or NEPA (1999), *see* http://www.gsa.gov/pbs/pt/call-in/factsheet/1098b/10_98_5.htm. Step 4 published in these guidelines is a 'scoping' step, preceded by: 'develop public involvement', 'information gathering to identify and consider alternatives'

and 'define baseline conditions'. Otherwise there is broad overlap with the steps listed above, although NEPA suggests that, before developing a mitigation plan, there should be an effort to identify new alternatives in light of unexpected
developments since starting the SIA.

    TOR = terms of reference.

    * Even without development the situation may be one of decline or improvement, no change, cyclic change, random change or predictable change.

Sources: Finsterbusch (1985: 200-1); Inter-organizational Committee on Guidelines and Principles (1994); Wolf (1983)

has been identified, the assessor has to determine the reliability of the prediction, its implications and significance. The forecasting techniques can be divided roughly into extrapolative and normative. The former group includes conjecture, brainstorming, the Delphi technique, trend analysis, correlation and regression statistical techniques, simulations, gaming, and scenario prediction. Normative techniques include modelling, decision theory, matrix methods and network methods.

    SIA, like EIA, uses a wide range of techniques - some it has developed, many others are borrowed from other fields, including sociology, psychology, anthropology, risk assessment, economics, market research, management studies, ecological modelling, structural analysis *(see* Glossary) and systems analysis (Henshel, 1982; Muth and Lee, 1986; Peters, 1986). As with EIA, a valuable characteristic of a technique is that it should help improve objectivity of assessment and reduce the risk that variables are missed or double-counted. The bulk of techniques are used to help understand situations and to predict future events. Others are employed to calculate the significance of identified impacts, to present results (in an impact statement or report) and to help choose between available development options.

    SIA usually has to be carried out to a tight deadline, so data collection and processing has to be rushed. These quick and dirty techniques may suffice for practical SIA, but are unlikely to have much value for researchers wanting accurate data. Many of the techniques used by SIA must be modified for a given assessment situation. There is constant evolution of new and improved techniques, and it is desirable that they be applied by specialists. Some techniques have generated mountains of literature. So, it is impossible and undesirable to give more than a brief overview here. One point that should be emphasized, however, is that some SIAs expend too much effort on identification of impacts and not enough on the next stage: careful assessment and evaluation. With growing improvements in computing facilities, increasing bodies of personal data available on databases and rapidly evolving modelling, expert systems and statistical analysis programs, some of the challenges facing SIA are diminishing - notably, preparation time is being reduced and accuracy increased.

SIA is more likely to predict future scenarios or employ conjecture than to make accurate forecasts (a scenario can be defined as a narrative description of the potential course of development) *(see* Figure 6.3). As Finsterbusch (1985:207) noted, a scenario can be derived from little more than guesswork, so as much as possible should be done to check its plausibility. Also, it is important to ensure that the way a scenario is derived is clear, and to invite independent experts to carry out checks on a SIA team's results. Finsterbusch (1995:245) went further, calling for outside expert checks at several points in the SIA process, especially where an assessment was not routine but broke new ground or was particularly difficult.

Brainstorming

Some would hesitate to recognize this as a real primary data gathering method because it is based more on speculation than research. Brainstorming is a quick initial step for generating ideas and suggestions (rather than research data). An appropriate group is encouraged to discuss an issue, often using a flipchart or blackboard on which a discussion leader can quickly note points with minimal disruption to proceedings before attention shifts to something else.

Figure 6.3 Steps in scenario generation *Source:* Vlachos (1981), Figure 1, p. 168