CASES AND PRACTICES

Social impact assessment: a critical tool in land-development planning

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Introduction

While it is usual in introductions to give an overview of the area or speciality being discussed I intend here to invert this pattern by proceeding from a problem which directly and existentially impinges on me at this moment to a more general discussion of social impact assessment (SIA) later.

I am writing this in a *barangay* (small community) on a small but densely populated island in the Philippines. Over a long period the islanders have, through their culture, been conditioned to behave in certain ways especially with regard to allocating the means of the production of their staples—rice, fish, coconuts, green vegetables. Cultural contact with the West, initially with the Spaniards, has made much of this conditioning irrelevant. Of course there are official plans even for this tiny *barangay* and these have been initiated by national, provincial and municipal governments and a regional development authority.[1] What these plans reveal, mainly by default, is how difficult it is to re-condition communities unless there is a realization by planners that somehow they must tap the changing priority perceptions of villagers and interpret these in terms of what is happening in the wider biotic and economic world. To be a little more specific without going into great detail: in terms of the ratio of population to land this *barangay* has very probably reached saturation point with its existing agricultural technology. The current strategy to relieve this situation is to export population to Manila, elsewhere within the nation and overseas, especially to the United States and Saudi Arabia. The local plan does not come to grips with the absence of the most able-bodied men nor does it attempt to assess what resources they are able to tap elsewhere to assist their parent community. In the past year the *barangay* has been hit by three typhoons (*unés*). Because of the frequency of such typhoons as many as thirty or forty locations on the island may be affected in any one year. The effects of these continuous natural disasters include: (a) damaged water supplies leading to sickness; (b) human injury; (c) damage to housing and other constructions, such as roads; (d) changing land forms, e.g. eroded inland mountain areas and flooded, debris-covered rice fields; (e) reduced staple-crop production—coconuts delayed by up to two years, bananas, six months, rice, three to four months, vegetables, two to four months. Again the plan is deficient. Some way along the coast,

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a very large copper corporation is spewing its lethal waste directly on to the reef and into the sea. This, together with the predations of large fishing boats from elsewhere, is putting a pressure on remaining fish supplies. The plan does not address this problem. Because of a lack of food-storage facilities, fresh food, to be distributed quickly, must be hawked from house to house. Although most other economic activities are meticulously recorded, the plan does not touch on the significance of this practice. The price of the raw materials the island exports—copra, copper concentrate—is falling continuously in terms of the costs of imported manufactured and processed goods. However, the plan calls for more exports, admittedly on a more diversified basis.

And so the list could continue. But criticism is not the purpose of this exercise: rather it is intended to show a niche into which a competent SIA team might be fit for the purpose of assisting local people. The thrust of such an exercise would not be to identify the *barangay* residents as a problem but to make very explicit the likely and existing problems the outside world will and already has imposed on the island. It may be hoped that such an exercise, of which education is an integral part, would lead to a more adaptive, even strongly reactive, cultural conditioning so that future challenges might be better dealt with. This objective is in no way meant to denigrate the adaptive strategies of local people to date. However, widespread poverty does indicate that past coping techniques have been inadequate from a material welfare point of view.

What is social impact assessment (SIA)?

In the past decade environmental and technological assessment have come (and gone?) as modes of assessing certain kinds of impacts usually associated with large-scale development projects. The focus in both these kinds of assessments was not directly on the impact of contemplated changes on human and existing institutions. Interdisciplinary or ideally metadisciplinary SIA hopefully redresses this hiatus. From my own perspective as a practitioner in developing nations and as a would-be human ecologist, I see SIA as following upon a large-scale development which has been commenced or concluded—for example extensive or intensive land use for agriculture, mining and urban development. Such post hoc SIA attempts to extricate patterns of population-resource relationships and show how costs and benefits may be allocated, beyond the narrow traditional categories favoured by economists. For example, where a natural vegetative system supplies resources to hunting and gathering groups the 'costs' to these groups of the destruction of that resource would be made explicit. Such costs would be based on the people's own perception of the value of that resource rather than on an externally imputed valuation. Post facto SIA is of value only if the lessons from analysed impacts are in fact transferable and used in designing new projects and developments. The other type of SIA is, of course, anticipatory, and involves speculation in terms of likely first, second and subsequent order social effects of projected developments, but not even such SIA occurs in a historical vacuum. Likely impacts can often be inferred from a proposed project's track record elsewhere. Hence it is often essential to possess performance records of transnationals and governments well ahead of the commencement of an anticipatory SIA. I have spelled out elsewhere (De'Ath, 1980) some of the more idealistic dimensions of SIA and how SIA can be less than effective without political commitment. From my work with Inuit and Indians in Canada's northern-most territories during the period (the early 1970s) when large oil companies were contemplating constructing a pipeline from the Arctic southward to the United States, I learned just how effective well-thought-through SIA-type hearings can be if a national government has a prior commitment to taking heed of their outcome. In this instance an embargo was placed on the

Land-use alternatives: a nineteenth-century fantasy of hay-making in the Place de la Concorde, Paris. Snark/Edimedia.

construction of the pipeline much to the chagrin of the proponents who spent many millions of dollars on feasibility studies. The outcome gave the original peoples of the area a feeling that even if their land was not totally inviolate they would at least have a breathing spell (ten years) in which to recoup their forces to resist further claims by outsiders.

SIA for whose benefit?

One could be quite cynical (and I am when I see the paymasters of many scientists) and advance that SIA is a new gimmick to keep a large number of scientists and bureaucrats employed. Or, alternatively that scientists, particularly natural scientists and geographers, are being paid to work on their pet projects regardless of whether or not they are relevant to SIA problems at hand. Ostensibly SIA is a means whereby governments allow—even encourage or manage—procedures so that various social groups will have an opportunity to react to contemplated or planned large-scale developments. However, the initiative for an SIA may stem from a non-governmental source, for example, a citizen's committee. My own work on the social impact of clear-felling of tropical forest in Papua New Guinea was supported by the Man and Biosphere Programme (Unesco) and the United

Nations Environmental Programme (UNEP).

In terms of defining a clientele I tend to favour providing advocacy for groups who, because they are not part of the status quo, find it difficult to secure affordable professional-scientific representation or who, because of their powerlessness, would appear likely to be penalized should a projected development occur. This role does create problems when a paymaster, if indeed there is one, is not sympathetic towards either a poor but articulate group or one that risks being victimized. Ideally, however, SIA should be a co-operative effort by a team, the members of which are ideologically compatible and can negotiate collectively.

In parts of Africa, South-East Asia, Oceania and South America, groups of indigenous subsistence farmers and hunters and gatherers still exist. They could be extremely disadvantaged should developments occur which involve extensive changes in land use-patterns, because they have never experienced 'development' on such a scale and have no conception of its consequences: the ecosystems on which they depend for resources will frequently be modified beyond a point where regeneration is possible; and because they do not have the skills which may allow them to survive (let alone move smoothly into) an introduced Western-type culture, a culture in which the economic system is at complete variance with their own.

SIA as a tool in land-development planning

The twentieth century seems to be the age of the technique or tool. In many ways, to categorize SIA is thus to fall into the trap of reductionism, a trap into which certain applied sciences have fallen. Naturally, SIA practitioners, like planners, delineate the problems at hand with manageable boundaries, given the finite resources available. However, in so doing, again like the planners, they neglect the opportunity to break through disciplinary and geographical boundaries and static cultural imperatives. To be more explicit: in a recent planning exercise in the South Pacific it was found that crucial factors maintaining the viability of many villages, especially those which were landless, was the ability to export high-school graduates who initially had the edge on the better-paid jobs in government and the private sector. These workers were able to remit large sums which were equitably distributed in the home village. Unfortunately, as other localities catch up educationally, the more recent graduates are losing their edge in the employment market. An obvious planning strategy would be to enter tertiary education and areas not covered by tertiary institutions elsewhere. However, government officers, raised on a credo of roads and bridges and on the need for the provision of infrastructures for corporations to exploit the very finite forest and fish resources, were unable to see that this, from a social and ecological perspective, was the least harmful way of incorporation in the larger Westernized economic system. The problems surfacing in such places as Western Samoa and the Kingdom of Tonga were either not known about or thought to be irrelevant to the situation.

The alternative to reductionistic, restrictive thinking is expansive or global apprehension. This is becoming more and more pertinent as the wider global system impinges increasingly on the periphery in a not very positive way. Depending on the philosophy of the planner or the SIA practitioner knowledge of the larger system may allow defensive or active planning. The important thing to remember however is that, as the economic world shrinks the impetus of change, growth and exploitation is more likely to come from beyond a community than from within it. Such an initiative is likely to be strongest where there are resources that have value on the international market. Thus, delineating spatial and vector boundaries becomes more and more difficult as people around the globe incorporate, become culturally homogenized and depend on the same resources. A similar problem exists with respect to time. At what

point in time do problems originate? Do those areas spatially and temporally defined by SIA merely represent tiny spots of rust on one of the massive links in the long chain of cause and effect in development and in the unfolding of the global ecosystem? Global ecologists using satellite surveillance, for example, can survey with apprehension the creeping desertification in North Africa. Even over a fairly lengthy period they would however probably be hesitant to accord specific weighting to what is caused by climatic change, normal seasonal variations or the effects of agricultural practices. This is the problem of the 'big thinking' scientist who proposes to measure forces contributing to change and pass this information on to those on the ground, who have a much more circumscribed, even parochial, vision of the local situation and direction of change.

Is there a general approach for SIA?

As can be inferred from the foregoing discussion, SIA is not bounded by scale. The primary purpose of SIA might be defined as the reflexive examination of socially cohesive communities in the context of the natural resources on which they depend and the forecasting of the likely effects of contemplated change, especially in terms of redefining social relationships and resource dependencies. In this perspective, the steps by which SIA can be approached could be listed as follows.

A community or even a large-scale social unit such as a nation-state becomes aware of significant change under either internal or external impetus, often, associated with the intrusion of large constructions or high technology.

Preferably the community itself requests an SIA to examine the existing social situation, the resource base on which the community survives and the probable effects of change.

An SIA team with skills for the task at hand then proceeds to:

1. Garner as much information as possible on how the community perceives itself, which does not prevent the team from making its own assessment of the situation.
2. During this process, the team continuously tries to integrate information, tease out internal ideological differences and monitor the local situation to ensure support which, however, does not mean that the team will not at some stage become consciously partisan.
3. The change-carrying vector is then examined, as are what have traditionally been designated as 'externalities'.
4. Where information on similar developments elsewhere is available it is incorporated as background for the assessment.
5. A preliminary assessment of the situation and the likely effects of change is publicized. This phase is heuristic and most important, especially when the long-term effects the team contemplate are at variance with those of the community.
6. In the light of the above, assessment may be revised.
7. The team maintains an ongoing relationship with the community and if there are recommendations, especially controversial ones, it attempts to have these implemented politically. Scientists have typically been taught to avoid this phase and Phase 2. The myth of the value-free scientist persists, despite its annihilation in most of the professions.

If the focus of such an exercise is on changes (particularly extensive ones), in land-use patterns in an agricultural community, a good deal of discussion is likely to arise particularly when the agriculturists have had a close relationship with their land over many generations. From a basic discourse on land reform (Querel, 1974), it emerges clearly that land-occupiers are pragmatic and well aware of the implications of 'reforms' tailored by outsiders ostensibly to benefit agriculturists. This perceptive work documents various failures of attempted land reform and one must wonder whether policy-makers could not have drawn up their legislative-fiscal proposals more effectively if they had been able to share the in-

Two stages in ecological balancing: caterpillar, *lymantria dispar*, eats leaf and is in turn devoured by beetle, *calosoma sycophanta*.

sights of an SIA team well versed not only in Asian agriculture but above all in the social relationships of small farmers with those beyond their communities who profit from their crop surpluses.

Why land is an important focus for SIA

Webster's *Dictionary* defines 'land' as a 'the solid part of the surface of the earth', the earth, country or district, and 'real estate'. An interesting aspect of these definitions is the emphasis on land as a discrete entity irrespective of what is on it, over it or under it. The last definition is a reflection of how basic land is in commerce and how it can be owned. But impressed non-Western cultures classify land differently. In Papua New Guinea where hunting, gathering and swidden agriculture are common, villagers see their land as part of an animate entity and as the host to numerous spirits of the dead and animals which can change into humans. The origin of the land-owning clan is intimately bound up with the origin of the land they hold in trust from generation to generation. Extra-human forces to a great degree determine how successful their relationship will be with the land, that is its productivity. At a much more pragmatic level, people know from types of vegetation where and what kinds of garden crops will flourish. They also continuously monitor wild-life and are expert in locating fruits and what wild animals and insects depend on them. The emphasis is not so much on agricultural mastery but on an understanding of how the forest produces, and why. In such a situation Western-type reification and disposal of land for cash is a difficult concept for the trustees of the forest to handle. By contrast, in South-East Asia land is valued according to the weight of rice it will produce: in some areas there are up

The caterpillars ravage the east coast of the United States where the climate does not suit their predators. Anne and Jacques Six.

to two dozen or more categories based on this criterion. Land unfit for rice is fit for cattle, orchards or other specialized crops. Land that is difficult to use for any of these categories is regarded as waste land and as a last resort can be used for gathering firewood, quarrying, etc. Tidal mangrove areas, river flood plains, mountain catchment areas not being used for crops are thought to be non-productive, much to the consternation of the ecologist or even the sensitive land-use planner. Economic pressures and different cultural emphases create entirely different attitudes toward land in different parts of the world. SIA ignores these varying definitions at its peril.

However, despite these variable cultural definitions, attitudes towards land and its vegetative mantle may be changing. Until very recently Western developers tended to see land as merely a space to be filled by whatever activities or constructions the developer had in mind. High technology and copious supplies of energy permitted this attitude. A developer could even claim to exercise 'climate control' while the social arrangements linking people with their land through agriculture, hunting, gathering and various settlement patterns were seen as impediments to large-scale change particularly in potential urban areas.

Now there is a growing awareness among governments, international agencies and private conservation groups that land may be something more than a platform for constructions, a resource to be mined as quickly as possible, a space suitable for an infinite number of human activities most of which are inimical to the natural vegetation, or an area to be geometrically carved up for serried rows of industrial monocrops. This awareness may have been prompted by a number of factors.

For a start there is now very little place for the frontier mentality of the nineteenth century, there being little 'ownerless' land still available. Significantly, those out to conquer

new frontiers now go under the sea, into space or into some esoteric area in applied science or technology.

Secondly, feedback from previous unwise land-use practices may be reaching the various sections of the world public.

Thirdly, as the technologieal inputs for modern agriculture become scarce and expensive, there is a growing belated awareness that natural biological systems depend basically on soil nutrients, sunlight and water which are singularly efficient at producing biomass for food, firewood, genetic materials, medicines and the like. 'Primitive' peoples know how to tap these without destroying the natural resource base.

Fourthly, the growth of cities, which represent highly concentrated settlements, has proved that they need immense resources to remain viable and grew, and that while they are efficient and powerful in terms of aggregating resources they are hopelessly inefficient and powerless in dispersing wastes in benign forms. Inappropriate waste-disposal policies can and do devastate large land and groundwater catchment areas adjacent to industrial centres.

Fifthly, exponential increases in population, consumption and per capita income coupled with relative decreases in land availability have lent land a new value, which extends even to open spaces and parks now that urban dwellers have lost access to such areas in their built-up environment. Like antiques in an age of mass standardized production the old, the traditional and the 'natural' take on new value, land with an undisturbed vegetative mantle being no exception. Ironically too, only a privileged few have access to antiques or can play the role of conservationists of nature.

Which development models seem appropriate?

Following wide experience in less developed areas I have come to the conclusion that in its basic form, stripped of rhetoric, development merely represents an attempt to imitate industrial patterns. This may not be a bad thing but it is rather ironic at a time when many people in the industrialized nations are entertaining grave doubts about the appropriateness of the model.

Certain circles in developing nations believe that anything less than slavish imitation of industrialism is unacceptable, so that, for example, the environmental movement with its emphasis on appropriate technology, resource conservation, population control, energy conservation and the like is something of a conspiracy by the haves to retain their ascendant position. Often the cost of participation in international trade is, in one way or another, very high. The developed states have interests in obtaining cheap unprocessed raw materials, cheap labour and, if necessary, land for agriculture, industry, mineral or forestry extraction and tourism.

All of which poses many problems for advisers who would gladly opt for alternative developmental routes so that Third World nations do not squander their resources to outsiders or by too rapid local consumption.

Land itself cannot be packaged and processed for expert, but its products can, and ownership can pass into foreign hands. Even if land is not directly alienated it can become indirectly subject to the whims of foreign consumption habits. For example, land which has been planted in long-term, export-oriented tree crops such as cacao, coffee, coconuts or palm-oil can lose its value as the demand for these crops declines, and there has been a persistent decline in the value of such crops in terms of manufactured imports.

Considerations such as these bring to the fore some of the very basic questions planners and SIA practitioners should be asking before they become involved in an exercise. Unfortunately, the overall economic logic of different choices may not always be clear to such practitioners themselves, or made explicit to clients.

Some hidden assumptions and biases

Deeply imbedded cultural values and entrenched attitudes towards people, animate and inanimate resources and how, when and why things occur or should be done, permeate even the attitudes of scientists. For example, development personnel originating from cultures in which social hierarchies are extremely well delineated prefer to deal with their peers and feel extremely uncomfortable in having to deal with poor farmers or squatters. Ethnocentricity, often predisposes persons to perceive other cultures as impediments to their interpretations of development: the concept of cultural functionality is quite alien to their thinking. Alien also is the need for cultural diversity and the strength derived from many cultures drawing on different resources and having different activity paradigms and priorities. In matters of social justice, social welfare and equity as spin-offs from economic growth, one school of thought considers it crucial that health, nutrition, shelter and education be the central focus of development regardless of the adequacy of the material base. Another sees these amenities as merely concomitant of unfettered economic growth. Both approaches are probably somewhat beside the point if adequate resources, migration opportunities and skills are unavailable.

There have also been some rather strange ironies in development which raise grave questions about the efficacy of planning and the wisdom of non-planning. Two examples must suffice. It has been Marxist-Leninist orthodoxy to plan agriculture to establish factories in fields, i.e. industrialized agriculture geared to mass production. But this has been successful chiefly in nations with *laissez-faire* economic systems such as the United States. Another example is the (mainly physical) planning of cities. Over time the built-up morphology of a planned city such as Philadelphia turns out to be very similar to that of an unplanned one such as Houston. One of the alternatives to planning is to assume that international development has a trajectory and logic, even a determinism, of its own and the best that can be done is to try to understand it and mitigate its worst effects. It may well be, however, that each nation has, as it were, its own implicit cultural agenda and that as an internationalized culture emerges it will also have its own implicit agenda. To assume that this is happening however begs the question as to whether anything can be done to eliminate some of the inequalities that will occur if this paradigm has any validity.

The determinism of certain social sciences, especially economics, seems to allow very little latitude or free will to people in the determination of their actions. Thus, some of the arguments by socio-biologists in certain ways parallel religious debates about free will, predetermination and predestination, substituting genetic programming for God. Humans are programmed to behave very much like animals and will probably multiply until they exhaust the resources necessary for their survival. Such theories are not particularly helpful in assisting SIA practitioners to forecast individual and collective behaviour.

In conclusion I would suggest that SIA be practised so as to share with host populations knowledge of what is happening in the wider national and global contexts. Developers and the media frequently provide the gloss which accompanies change; assessment should seek to go beyond this gloss.