

## 5 AN SIA MODEL FOR SOUTHERN AFRICA

An SIA considers social aspects that affect human life in the environment. As SIAs in Southern Africa are an integrated part of EIAs or EMPRs, it is important for an SIA to determine its parameters, either by means of defining the scope of work to be included in the proposed assessment. An SIA must include the following steps:

- Step 1: The determination of *the need* for a social impact assessment, and of the *objectives* of such a study.
- Step 2: A *public involvement programme* that enters into dialogue with affected parties to obtain their input throughout the impact assessment. This is both a scientific and political requirement in SIA methodology.
- Step 3: During the involvement of the public, *the topics and issues to be addressed* can be identified.
- Step 4: *Obtaining information* on the alternatives being considered and on the existing conditions. This is basic information for both the SIA and for any policy decisions that claim to be rational.
- Step 5: “*Scoping*”, which is probably the key step in designing the SIA. It involves two steps, the first being the development of a relatively exhaustive list of potential impacts of the action and, second, the selection, from that list, of the potential impacts to be studied in the SIA.
- Step 6: The *main research step, namely the projection of estimated effects*. The three main information sources for impact identification are the literature, experts and field research (including informant interviews). The social impact assessor tries to establish what happened in similar past cases through studying the available literature as a guide to what could happen in the case study.
- Step 7: The task of *predicting how the affected parties will respond*. It must be admitted that most SIAs do not implement this step, or do very little of it. It is essential to estimate higher order impacts and the political consequences of the action – information in which decision makers should take an interest. It also entails ascertaining the attitudes of affected parties towards both the action and its direct impacts, and their probable responses to the impacts. Respondents’ statements about their responses might poorly predict their subsequent actions, but their statements can at least alert the agency to potential problems that might be resolved by appropriate agency actions.

- Step 8: The *estimation of indirect and cumulative impacts*. This is an obvious next step, but is often neglected or skimped. Again the patterns found in past cases can guide this step.
- Step 9: *Recommendations for change in the action or alternatives* that would avoid the predicated negative impacts and enhance the positive impacts.
- Step 10: *Mitigating the negative impacts* by avoiding, minimising, rectifying or reducing the impact, or providing compensation.
- Step 11: A *monitoring programme* to ensure that negative impacts are dealt with as they happen. Most SIAs lack this step but it should be remembered that the purpose of assessing impacts is to manage them. A programme that monitors the impacts and adjusts the action to unanticipated new conditions must supplement an SIA.

Table 9 provides a list of all the variables that need to be considered in planning an SIA. This table contains all the common and unique variables derived from the analysis of the tables discussed earlier in the study.

**Table 10: List of all Variables**

<b>VARIABLES</b>
<b><i>Cultural resources</i></b>
• Structures and sites of architectural, cultural or historic heritage
• Sites of archaeological or palaeontological importance
• Special attraction of local sites, traditions or events
• Sites or areas of religious or spiritual significance
• Sites or areas of special social or cultural interest
• The integrity of cultural resources
• Physical amenities
<b><i>Socio-economic characteristics of the affected public</i></b>
<i>Demographic aspects:</i>
• Growth rate of the local population
• Location, distribution or density of population
• Age or gender composition
• Biographical composition of population
• Migration movements
• Inflow of tourists/presence of seasonal (leisure) residents
• Relocation of individuals and families
<i>Economic and employment status of the affected social groups:</i>
• Economic base of the area
• Distribution of income

<b>VARIABLES</b>
<ul style="list-style-type: none"> <li>Local industry/industrial diversification</li> </ul>
<ul style="list-style-type: none"> <li>Rate and scale of employment growth</li> </ul>
<ul style="list-style-type: none"> <li>Labour needs and the spare labour capacity of the area</li> </ul>
<ul style="list-style-type: none"> <li>Movement of labour away from employment in the area</li> </ul>
<ul style="list-style-type: none"> <li>Competition by non-local labour moving into the area</li> </ul>
<ul style="list-style-type: none"> <li>Non-local labour remaining in the area after completion of development</li> </ul>
<ul style="list-style-type: none"> <li>Agricultural activities</li> </ul>
<ul style="list-style-type: none"> <li>Pressure to comply with particular skills, age range or gender needs</li> </ul>
<ul style="list-style-type: none"> <li>Job opportunities for school leavers</li> </ul>
<ul style="list-style-type: none"> <li>Short- and long-term unemployment trends</li> </ul>
<ul style="list-style-type: none"> <li>Formation of attitudes towards the project</li> </ul>
<ul style="list-style-type: none"> <li>Interest group activity</li> </ul>
<ul style="list-style-type: none"> <li>Government structure/alteration in size and structure of government</li> </ul>
<ul style="list-style-type: none"> <li>Changes in laws</li> </ul>
<ul style="list-style-type: none"> <li>Planning and zoning activity</li> </ul>
<i>Welfare profile:</i>
<ul style="list-style-type: none"> <li>Incidence of crime, drug abuse or violence</li> </ul>
<ul style="list-style-type: none"> <li>Extent of homelessness and overcrowding</li> </ul>
<ul style="list-style-type: none"> <li>Adequacy of services</li> </ul>
<ul style="list-style-type: none"> <li>Adequacy of support systems such as crèches and shelters for destitute children</li> </ul>
<ul style="list-style-type: none"> <li>Quality of life</li> </ul>
<i>Health profile:</i>
<ul style="list-style-type: none"> <li>Availability of clinics/health services</li> </ul>
<ul style="list-style-type: none"> <li>Incidence of disease</li> </ul>
<ul style="list-style-type: none"> <li>Incidence of mental illness</li> </ul>
<ul style="list-style-type: none"> <li>Threats to health from pollution</li> </ul>
<ul style="list-style-type: none"> <li>Role of nutrition/availability of food</li> </ul>
<i>Cultural profile:</i>
<ul style="list-style-type: none"> <li>Lifestyles, household composition and family network</li> </ul>
<ul style="list-style-type: none"> <li>Religious and cultural attitudes, outlooks and expectations</li> </ul>
<ul style="list-style-type: none"> <li>Cultural or lifestyle diversity</li> </ul>
<ul style="list-style-type: none"> <li>Cultural or lifestyle stability</li> </ul>
<ul style="list-style-type: none"> <li>Change in leisure opportunities</li> </ul>
<ul style="list-style-type: none"> <li>Presence of outside agencies</li> </ul>
<ul style="list-style-type: none"> <li>Introduction of new social classes</li> </ul>
<ul style="list-style-type: none"> <li>Presence of weekend residents (recreation)</li> </ul>
<b>Social infrastructure services</b>
<i>Education:</i>
<ul style="list-style-type: none"> <li>Demand for specific types of technical skills training</li> </ul>
<ul style="list-style-type: none"> <li>Demand for specific types of industrial training</li> </ul>
<ul style="list-style-type: none"> <li>Adequacy of existing technical institutions</li> </ul>

<b>VARIABLES</b>
<ul style="list-style-type: none"> <li>• Adequacy of nursery, junior and secondary education facilities</li> </ul>
<ul style="list-style-type: none"> <li>• Need for additional education facilities</li> </ul>
<ul style="list-style-type: none"> <li>• Demand that exceeds the planned provision of education facilities</li> </ul>
<ul style="list-style-type: none"> <li>• Pre-school facilities</li> </ul>
<i>Housing:</i>
<ul style="list-style-type: none"> <li>• Property values and levels of rates</li> </ul>
<ul style="list-style-type: none"> <li>• Potential conflict over land use</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of housing stock</li> </ul>
<ul style="list-style-type: none"> <li>• Need to release additional land for housing development</li> </ul>
<ul style="list-style-type: none"> <li>• Acceptability of such land release</li> </ul>
<ul style="list-style-type: none"> <li>• Adequacy of infrastructure for further housing development</li> </ul>
<ul style="list-style-type: none"> <li>• Ability of private or local authority to provide housing</li> </ul>
<ul style="list-style-type: none"> <li>• Compatibility of planned development with existing housing</li> </ul>
<ul style="list-style-type: none"> <li>• Location of suitable housing sites</li> </ul>
<ul style="list-style-type: none"> <li>• Sites suitable for construction camps</li> </ul>
<ul style="list-style-type: none"> <li>• Standard of facilities required by authority</li> </ul>
<ul style="list-style-type: none"> <li>• Design and layout of site facilities</li> </ul>
<ul style="list-style-type: none"> <li>• Use to which construction camp may be put after construction period</li> </ul>
<ul style="list-style-type: none"> <li>• Land acquisition and disposal</li> </ul>
<b><i>Social and community services and facilities</i></b>
<i>Health service facilities:</i>
<ul style="list-style-type: none"> <li>• Adequacy of temporary facilities during construction phase</li> </ul>
<ul style="list-style-type: none"> <li>• Adequacy of on-site health facilities</li> </ul>
<ul style="list-style-type: none"> <li>• Adequacy of facilities for primary health care</li> </ul>
<ul style="list-style-type: none"> <li>• Adequacy of health services to cope with increased population</li> </ul>
<ul style="list-style-type: none"> <li>• Projected provision of health service facilities</li> </ul>
<ul style="list-style-type: none"> <li>• Need for additional facilities</li> </ul>
<i>Emergency services:</i>
<ul style="list-style-type: none"> <li>• Adequacy of emergency services</li> </ul>
<ul style="list-style-type: none"> <li>• Projected provision of services to meet increased demand</li> </ul>
<ul style="list-style-type: none"> <li>• Need for additional emergency services</li> </ul>
<ul style="list-style-type: none"> <li>• Adequacy of the emergency and safety services provided by the developer</li> </ul>
<ul style="list-style-type: none"> <li>• Ability of local resources to deal with emergencies</li> </ul>
<i>Recreational facilities:</i>
<ul style="list-style-type: none"> <li>• Adequacy of existing facilities</li> </ul>
<ul style="list-style-type: none"> <li>• Projected provision of facilities to meet increased demands</li> </ul>
<ul style="list-style-type: none"> <li>• Need for additional facilities</li> </ul>
<ul style="list-style-type: none"> <li>• Recreational and service facilities in the workplace</li> </ul>
<ul style="list-style-type: none"> <li>• Supporting infrastructure: police, libraries, etc.</li> </ul>
<ul style="list-style-type: none"> <li>• Shopping facilities</li> </ul>
<b><i>Risk and hazard:</i></b>

<b>VARIABLES</b>
• Level and identity of hazard to the public
• Probability of occurrence
• Extent of effect – local, regional or panoramic
• Standards required for process equipment
• Safety and design review
• Safety audits
• Hazard and operability reviews
• Failure mode and effect analysis
• Workers' safety/degree of risk
• Level of risk and hazard for other living organisms
<b>Health and safety</b>
• In the workplace
• Surrounding areas
<b>Psychological features</b>
• Involvement
• Expectations
• Stress/frustrations
• Mobility
• Family lifestyles
• Community feelings
• Self-expressions

## 5.1 CONCLUSION

Over the past forty years the SIA has changed and grown into a broad process that can be applied to a development project to determine the possible impacts of the project on the daily lives of the affected community. Thus the SIA has become an economic and political tool.

SIAs are being conducted in Southern Africa and form part of the EIA process. The SIA consists of a number of steps which, depending on the project size, may be incorporated with the EIA. The internationally adopted SIA can be applied in the Southern African context. This means that the practitioner attends to the following steps: a public involvement programme; collection of information; scoping; projection of the effects; prediction of how the affected parties will respond; estimation of indirect and cumulative impacts; proposals for changes or alternatives; mitigation; and monitoring. In the case studies discussed in this dissertation the SIA was the

instrument for public involvement in the whole project and not only in determining the social impacts.

Barrow, C.J. 1997. *Environmental and Social Impact Assessment*.

The social variables used in Southern Africa are the same as listed by the ICGP. However, the variables need to be extended to cater for third world scenarios. For instance, the informal sector in the economy, land tenure types and the associated cultural aspects, and the issue of food and nutrition should be taken into consideration.

Bond, A.J. 1995. *Integrating Socio-Economic Impact Assessment*.

## 5.2 RECOMMENDATIONS (41)125-127

The student and practitioner of SIAs in Southern Africa should apply the standards and social variables that have been adopted internationally because they have been shown to be relevant to the Southern African region in that they disclose the social impacts of development projects on people's daily lives.

Ecology Press, Madison, Wisconsin

However, as the Southern African context contains both first and third world characteristics, the latter has to be catered for. This study has therefore explored five case studies with a view to identifying variables that need to be added to the SIA in Southern Africa and other third world regions. These variables turned out to be more specific issues that should be included under the main headings. The relevant variables are: the contribution of the *informal economy* to the regional economy; *land tenure types* and the possible associated heritage aspects; and *food security and nutrition*, which is associated with settlement pattern and land tenure. Which of these variables are relevant might differ from project to project.

In addition, the Southern African context requires that certain established topics such as economic and employment of affected social groups, health profile, cultural and housing profiles be studied in more detail and also that the broadest possible range of these topics be addressed in development projects. The issues such as identified might have a very important impact on the project and so enhance progress and the development of communities in developing countries.

De Waal, D. and Breytenbach, J. 1995. *Social Impact Assessment of the Closure of the Dumeznil Mine*. AfriResearch, Pretoria