



RESEARCH ARTICLE

APPLICATION OF SOCIAL IMPACT ASSESSMENT IN INDIA: A COMPREHENSIVE OVERVIEW

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ABSTRACT

Economic development projects brought innumerable benefits but also had unintended detrimental effects on people and natural resources. Human activities have resulted in the disruption of social and communal harmony, the loss of human livelihood and life, the introduction of new diseases, and the destruction of renewable resources. These and other consequences can go against the positive benefits of economic development. Social impacts are the impacts of developmental interventions on human environment. The impacts of development interventions take different forms. While significant benefits flow in from different development actions, there is also a need to identify and evaluate the negative externalities associated with them. Such impacts not only need to be identified and measured but also need to be managed in such a way that the positive externalities are maximized and the negative externalities are minimized. In view of this, the present paper focuses on the principles and applications of Social Impact Assessment in detail.

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INTRODUCTION

A balanced development planning takes into account the environmental, social and biodiversity impacts of economic development. Environmental Impact Assessment (EIA), Social Impact Assessment (SIA) and biodiversity impact assessments are some of the methods that aid in the planning and decision making process. These impact assessments help in identifying the likely positive and negative impacts of proposed policy actions, likely trade-offs and synergies, and thus facilitate informed decision-making. Moreover, the need for impact assessment stems from the fact that:

- Impact assessments enhance positive and sustainable outcomes associated with project implementation.
- They support the integration of social and environmental aspects associated with the numerous subprojects into the decision making process.
- The enhance positive social and environmental outcomes;

- They minimize social and environmental impacts as a result of either individual subprojects or their cumulative effects;
- They protect human health and minimize impacts on cultural property.

Development Projects and their Impacts

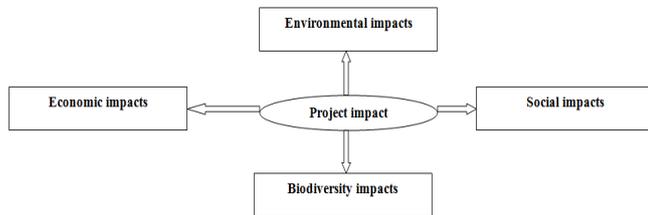
Sustainable development is increasingly accepted as a fundamental objective for public policy and decision-making. It encompasses the economic, environmental and social dimensions of the development process. The growing acceptance of sustainable development as an over-arching policy goal has stimulated interest in assessing the impact of particular interventions on sustainable development at aggregate, sectoral or project levels. Good environmental and social management practice is a well-established element of project preparation and implementation. Projects are usually situated within the ambit of specific policies and programmes. The impact of these projects can be economic, social and environmental.

Multi-dimensional impacts of projects: The multidimensional nature of development interventions call for identification of not only potential economic impacts but also potential social and environmental impacts. The fallouts

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of greater urbanization, population growth and globalization can have adverse social impacts in the form of increasing poverty, dislocation of vulnerable sections of the society, loss of livelihood etc. Simultaneously, the environment could also be adversely affected viz. increase in air and noise pollution, water pollution, land degradation etc. Even though these impact assessment processes are applied in many countries, biodiversity considerations are often inadequately addressed.



What are Impact Assessments?

Social problems arise largely due to conflicts between economic development and natural resources. Economic losses and social costs from environmental degradation often occur long after the economic benefits of development have been realized. Most often, the development projects provide economic benefits and better living environment, but they also affect local people adversely. Social impact assessments help in understanding such impacts.

Impact Assessments in the context of social development are:

- Processes through which the government departments/agencies can better understand how the socio-cultural, institutional, historical and political contexts influence the social development outcomes of specific investment projects and sector policies
- The means to enhance equity, strengthen social inclusion and cohesion, promote transparency and empower the poor and the vulnerable in the design and/or implementation of the project
- The mechanisms to identify the opportunities, constraints, impacts and social risks associated with policy and project design
- A framework for dialogue on development priorities among social groups, civil society, grassroots organizations, different levels of government and other stakeholders.
- Approaches to identify and mitigate the potential social risks, including adverse social impacts, of investment projects.

It is in this context that Social Impact Assessments (SIAs) assume great relevance. SIA mainly involves the processes of analyzing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. These assessments can enable the project implementing authorities to not only identify social and environmental impacts, but also to put in place suitable institutional, organizational and project-specific mechanisms to mitigate the adverse effects. They can also aid in bringing about greater social inclusion and participation in the design and implementation stages of the project.

What are social impacts?

The Inter-organisational Committee on Guidelines and Principles for Social Assessment (1994) (cited in Glasson 2000) defined *social impacts* as 'the consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs, and generally cope as members of society'. Social impacts are the 'people impacts' of development actions. Social impact assessments focus on the human dimension of environments, and seek to identify the impacts on people who benefits and who loses. SIA can help to ensure that the needs and voices of diverse groups and people in a community are taken into account. Social impacts include changes in people's way of life, their culture, community, political systems, environment, health and wellbeing, their personal and property rights and their fears and aspirations. Examples of projects with significant social impacts include: landfill and hazardous waste disposal sites (perceived health risks, loss of amenity); power and industrial plants (community stress from influx of work force, pressure on infrastructure); dams and reservoirs (lifestyle disruption resulting from relocation, land use alteration or long lead time to full impoundment); and roads and linear developments (dislocation of activity networks and relationships).

The main types of social impacts that occur as a result of these project-related changes can be grouped into five overlapping categories

- Lifestyle impacts - on the way people behave and relate to family, friends and cohorts on a day-to-day basis
- Cultural impacts – on shared customs, obligations, values, language, religious belief and other elements which make a social or ethnic group distinct
- Community impacts - on infrastructure, services, voluntary organisations, activity networks and cohesion
- Quality of life impacts - on sense of place, aesthetics and heritage, perception of belonging, security and livability, and aspirations for the future.
- Health impacts – on mental, physical and social well being, although these aspects are also the subject of health impact assessment.

What is Social Impact Assessment?

Social Impact Assessment (SIA) can be defined in terms of efforts to assess or estimate, in advance, the social consequences that are likely to follow specific policy actions (including programs/ projects and the adoption of new policies), and specific government actions. It is a process that provides a framework for prioritizing, gathering, analyzing, and incorporating social information and participation into the design and delivery of developmental interventions. The SIA ensures that the development interventions:

- Are informed and take into account the key relevant social issues; and
- Incorporate a participation strategy for involving a wide range of stakeholders. Social Assessment (SA), on the other hand, is a process that provides framework for prioritizing, gathering, analyzing and incorporating social information and participation into the design and

delivery of development operations (Rietbergen-McCracken and Narayan 1998).

Purpose of the Study

The broad objective of this paper is to study the application of social impact assessment that would enable policy makers to make balanced and informed policy decisions. The purpose of this paper is to serve as a guide to policy makers to:

- Elucidate the importance of social impacts of economic developmental activities to the policy makers.
- Enable greater sensitivity of the target audience to social impacts
- Provide step-by-step procedures for undertaking social impact assessments in a participatory manner.
- Help project implementers evolve mechanisms whereby adverse social impacts can be effectively mitigated.
- Make available a set of tools that can be of use while undertaking social impact assessments.

SOCIAL ASSESSMENT PROCESS CYCLE

(Adapted from Rietberg-McCracken and Narayan 1998)

It follows that the process of an SIA (or SA) is similar to the EIA process. The different stages of SIA (or SA) are illustrated in the form of flow chart in figure 4. Although, the major stages involved/steps followed in conducting SIA (or SA) are logically sequential, they often overlap in practice.

STAGES IN SOCIAL IMPACT ASSESSMENT

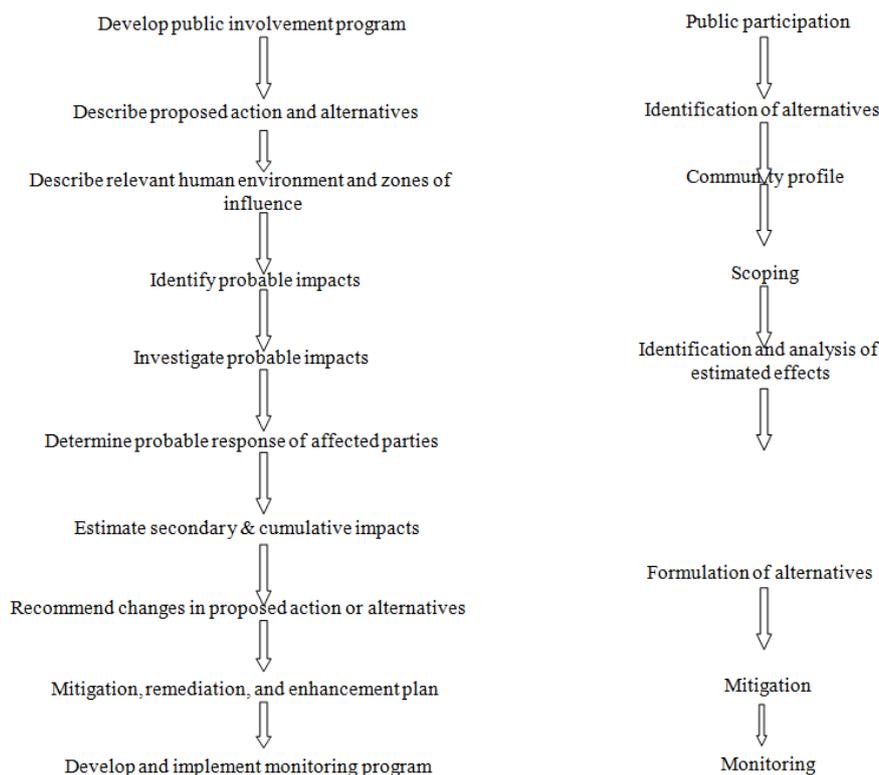
(Adapted from Impact Assessment and Project Appraisal, 2003)

According to the Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment (1994), the SIA involves undertaking various actions in the following major stages which are explained hereunder. Further, some of the guide principles are discussed.

PUBLIC PARTICIPATION

Developing and implementing an effective public participation plan to involve all interested and affected stakeholders is the vital first step.

Stages of Social Impact Assessment



The social impact assessment process

Social Assessment or Social Impact Assessment is process for ensuring that development activities are

- Informed by and take into account the key relevant social issues and formulate mitigative measures, and
- Incorporate a strategy for participation of wide range of stakeholders. Social assessment is an iterative process that has to be organized in a phased manner in several stages. Figure 3 provides an overview of the social assessment process featuring various phases of actions of the social assessment process.

This involves identifying the client population that will either benefit or be adversely affected by the project. Groups affected by proposed actions include:

- Those that live nearby;
- Those that may be affected by the development intervention;
- Those that may be displaced because of a project; and
- Those that have interest in a new project or policy change but may not live in proximity. Some others include those residents affected by the seasonal influx of people who may have to pay higher prices for food

or rent, or pay higher taxes to cover the cost of expanded community services etc.

A wide range of public participation techniques should be used to collect information about public response to a proposed action. This first step is vital as the public participation program follows throughout the implementation and monitoring.

Identification of Alternatives

It involves describing the proposed action and reasonable alternatives to it, including the no action alternative. During this stage, the proposed action is described in detail so as to identify the data requirements needed for the proponent to do a preliminary assessment. For example, in a new road construction project, the assessor would need to know the project location, land requirements, need for ancillary facilities (transmission lines, sewer and water lines), construction schedule, size of the work force (construction and operation, by year or month), facility size/shape, need for local work force and institutional resources. This apart from the social issues such as poverty, age, ethnicity and gender would provide a broader context of the project and its stakeholder profile. The project alternatives, including no project option, shall be identified and their suitability can be examined on the basis of the information on the project, area and social issues and in consultation with the wider stakeholders.

Profile of Baseline Condition

Document the relevant human environment/area of influence of the project and the existing social conditions and trends. Baseline simply means a geographical and time line to start the assessment. For example, with construction projects, a geographical area is identified along with the distribution of special populations at risk; but for policies, plans, programs, or other special assessments (such as, technology, health), the relevant human environment may be a more dispersed collection of interested and affected parties, pressure groups, organizations, and institutions. This information should describe the socio-economic traditions of the client group to be affected by the project (gender, no. of single headed households, family size, occupation, income and asset levels, education, access to health services, social organization, cultural distinctions, etc.).

Social impact assessment can be performed some times to get an overview of the social issues associated with the project in terms of some of the parameters:

- **Demographic factors:** number of people, location, population density, age etc.
- **Socio-economic determinants:** factors affecting income and productivity, such as risk aversion of the poorest groups, land tenure, access to productive inputs and markets, family composition, kinship reciprocity, and access to labour opportunities and migration.
- **Social organization:** organization and capacity at the household and community levels affecting participation in local level institutions as well as access to services and information.
- **Socio-political context:** implementing agencies' development goals, priorities, commitment to project

objectives, control over resources, experience, and relationship with other stakeholder groups.

- **Needs and values:** stakeholder attitudes and values determining whether development interventions are needed and wanted, appropriate incentives for change and capacity of stakeholders to manage the process of change.

Scoping of the impacts

This essentially involves identification and prioritization of the range of likely social impacts through a variety of means, including discussions or interviews with members of all potentially affected. The principal methods to be used by experts are reviews of the existing social science literature, public scoping, public surveys and public participation techniques. Figure 5 gives an illustration of the process. The methods for social analysis and participation include (Rietbergen-McCracken and Narayan 1998):

- **Workshop based methods:** Collaborative decision making often takes place in the context of stakeholder workshops, which bring stakeholders together to assess issues and design development projects collaboratively. A trained facilitator guides stakeholders through a series of activities to promote learning and problem solving
- **Participatory Assessment Methods:** Social assessments can also be informed by field visits to communities and other local-level stakeholders to learn about their perspectives and priorities. The consultations make use of participatory assessment methodologies such as participatory rural appraisal (PRA), SARAR or Beneficiary Assessment. These methodologies provide tools for collaborating with local people in analysis and planning, and can contribute to the development of action plans and participation strategies.

Identification and analysis of estimated effects

This essentially involves analyzing and predicting probable impacts of the project proposal and the alternatives against baseline conditions (with versus without the action). This involves investigating the probable social impacts in terms of predicted conditions without the actions (baseline condition) and (ii) predicted conditions with the actions and the predicted impacts. Investigation of the probable impacts involves five major sources of information:

- Detailed data from the sponsoring agency on the proposed action;
- Record of previous experience with similar actions as represented in reference literature to include other SIAs;
- Census and vital statistics; documents and secondary sources;
- Field research, including informant interviews, hearings, group meetings and, if funds are available,
- Surveys of the general population.

Methods of predicting the future impacts are at the heart of the SIA process. Care must be taken to ensure the quality and transparency of methods and data, and to provide for critical review. The following are some of the methods for analyzing and predicting social impacts

- **Comparative method:** This method examines how an affected community has responded to change in the past, or the impact on other communities that have undergone a similar action. The present is compared to the future with the proposed action. Based on past research and experiences in similar cases, determination of significance is made based on the comparative data presented.
- **Straight-line trend projection:** This method takes an existing trend and simply projecting the same rate of change into the future; we assume that what happened in the past is likely to happen in the future. For example, visitations for recreation increase each year at about the same rate they did in the past.
- **Population multiplier methods:** In this method, each specified increase in population implies designated multiples of other variables, such as jobs, housing units and other infrastructure needs.
- **Statistical significance means:** It involves calculations to determine probabilistic differences between with and without the proposed action. A social assessor could employ comparative statistical methods to determine statistical significance for appropriate SIA variables.
- **Scenarios:** These refer to logical-imaginings based on construction of hypothetical futures through a process of mentally modeling the assumptions about the SIA variables in question. Scenarios include exercises to develop the likely, alternative or preferred future of a community or society. Scenarios can be used to compare different outcomes (e.g., best versus worst case).
- **Consulting experts:** Use of expert knowledge such as researchers, professional consultants, local authorities, or knowledgeable citizens. Such persons familiar with the study area could be asked to present scenarios and assess the significant implications for the proposed action.
- **Calculation of 'futures forgone':** a number of methods have been formulated to determine what options would be given up irrevocably as a result of a plan or project, for instance, river recreation and agricultural land use after the building of a dam. The wetlands mitigation strategy is such an example.

The Indirect and cumulative impacts

These are estimated to identify the subsequent, flow-on effects of the proposal, including the second/third order impacts and their incremental impacts when added to other past, present and foreseeable current activities. Secondary or indirect impacts are those caused by the primary or direct impacts; they often occur much later, both in time and geographic distance, than primary impacts. Cumulative impacts are those resulting from the incremental impacts of an action added to other past, present, and reasonably foreseeable future actions regardless of which agency or person undertakes them.

Evaluation of Alternatives and Impact Mitigation

This involves evaluating alternatives in terms of projection of their consequences for affected and interested stakeholders. Each alternative or modification to the proposed action should be assessed separately. The estimation

methods described in step five apply here but usually on a more modest scale. Subsequently, a mitigation plan needs to be developed and implemented, in order of preference to firstly avoid, secondly minimise and thirdly compensate for adverse impacts. If the predicted impact is minimal and can be managed, mitigation measures must be put in place. These could be in the form of modification of the specific event in the project, operation and redesign of the project or policy or compensation for the impact by providing substitute facilities, resources and opportunities.

Monitoring Plan

This involves developing and implementing a monitoring programme to identify deviations from the proposed action and any important unanticipated impacts. This should track project and program development and compare real impacts with projected ones. It should spell out (to the degree possible) the nature and extent of additional steps that should take place when unanticipated impacts or those larger than the projections occur.

Identifying Social Impact Assessment Variables

Social impact assessment variables point to measurable change in human population, communities, and social relationships resulting from a development project or policy change. After research on local community change, rural industrialization, reservoir and highway development, natural resource development, and social change in general, we suggest a list of social variables under the general headings of:

- **Population Characteristics** mean present population and expected change, ethnic and racial diversity, and influxes and outflows of temporary residents as well as the arrival of seasonal or leisure residents.
- **Community and Institutional Structures** mean the size, structure, and level of organization of local government including linkages to the larger political systems. They also include historical and present patterns of employment and industrial diversification, the size and level of activity of voluntary associations, religious organizations and interests groups, and finally, how these institutions relate to each other.
- **Political and Social Resources** refer to the distribution of power authority, the interested and affected publics, and the leadership capability and capacity within the community or region.
- **Individual and Family Changes** refer to factors which influence the daily life of the individuals and families, including attitudes, perceptions, family characteristics and friend-ship networks. These changes range from attitudes toward the policy to an alteration in family and friendship networks to perceptions of risk, health, and safety.
- **Community Resources** include patterns of natural resource and land use; the availability of housing and community services to include health, police and fire protection and sanitation facilities. A key to the continuity and survival of human communities are their historical and cultural resources. Under this collection of variables we also consider possible changes for indigenous people and religious sub-cultures.

Application of Social impact Assessment

The importance of social impact assessment and its application in specific projects can be understood clearly by some of the examples or application case studies that are provided below.

Social impact of the Sardar Sarovar scheme, India: Key findings and conclusions from SIA (Berger, 1994)

Sardar Sarovar became the focus of the debate, in India and internationally, on how to balance economic development on the one hand, and human rights and environmental protection on the other. The environmental and social impact of the project components is immense and extends over a wide area. At least 100,000 people, in 245 villages, live in the area affected by submergence. In Gujarat and Maharashtra almost all of those affected are tribal people. In addition, there are 140,000 families who will be disrupted by the construction of the canal and irrigation system. The issues in Sardar Sarovar were complicated because the majority of those displaced were tribal people who usually have no formal title to the land they occupy and were considered by two state governments of Gujarat and Maharashtra to be encroachers and not entitled to resettlement. The review found this position to be non-compliant with recognized norms of human rights. In addition, it concluded that a number of issues of related to the environmental impact of the scheme were unresolved and questioned the assumptions used in project design and mitigation.

Some of the factors and considerations that need to be taken into consideration while undertaking social impact assessment include:

- **Taking account of initial response to project announcement** – support or opposition may be an impact itself or an indicator of the likely degree of community cohesion or conflict over social issues
- **Qualifying data sufficiency and reliability** – where SIA is hampered by a lack of adequate data, err on the conservative side in reporting any potentially significant impacts (e.g. stating that it cannot be ruled out with confidence rather than concluding it is not proven)
- **Predicting key issues** – it is better to be roughly correct on the matters that count, rather than quantifying the impacts that can be counted
- **Team building** – experienced social scientists need to be an integral part of the EIA team to predict these key issues and establish linkages to biophysical impacts. Often, team building must address cultural style as well as disciplinary differences, for example when relating an SIA to the EIA and project planning timetable on the one hand and the norms and traditions of an affected community on the other.

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