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SOCIAL IMPACT ASSESSMENT IN URBAN DEVELOPMENT IN MALAYSIA

NUR SYAFAWATY BINTI ABD RAHMAN

UNIVERSITI MALAYSIA PAHANG

"I hereby declare that I have read this report and in my opinion this report is sufficient in terms of scope and quality for the award of the degree of Bachelor of Civil Engineering"

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SOCIAL IMPACT ASSESSMENT IN URBAN DEVELOPMENT IN MALAYSIA

NUR SYAFAWATY BINTI ABD RAHMAN

A report submitted in fulfillment of the requirements for the award of the degree of achieving Bachelor of Civil Engineering

Faculty of Civil Engineering and Earth Resources

Universiti Malaysia Pahang

NOVEMBER 2009

I declare that report entitled “Social Impact Assessment In Urban Develompment In Malaysia” is the result of my own work except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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To my beloved family:

Mr. Abd Rahman bin Ismail

Mrs. Azizah binti Ariff

Nur Syahirah binti Abd Rahman

Azri bin Abd Rahman

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ABSTRACT

This study is about social impact assessment in urban development in Malaysia. In this study, social impact assessment is described and discussed. Social impact assessment is defined as ``the process of identifying the future consequences of a current or proposed action which are related to individuals, organizations and social macro-systems". In the cities of developing countries, the city's center is grown, so this is where for certain projects; impact on people can be by far the most important consideration. In such cases, a social impact assessment (SIA) is carried out as a part of the process. The study of Social Impact Assessment in Urban Development is been carried out in Malaysia. Questionnaire is distributed to the consultant firm, contractor and also government firm for this study. The objective of this study is to assess the way SIA has been used in the past, to consider how social impact assessment in urban development could be improved and to highlight best practice recommendations and general principals of social impact assessment that are relevant for urban development. As conclusion, social impact assessment is important to the urban development in Malaysia. The Social Impact assessment in Malaysia can be improved to prevent the negative impacts.

ABSTRAK

Kajian ini adalah untuk mengkaji Penilaian Kesan Sosial ke atas Pembangunan Bandar di Malaysia. Di dalam kajian ini, penilaian kesan sosial dihurai dan dibincangkan. Penilaian Kesan Sosial di sini bermaksud proses mengenali atau mengenalpasti akibat atau permasalahan pada masa akan datang bagi perkara yang sedang atau akan berlaku yang berkaitan dengan individu, organisasi, dan sistem makro sosial. Di dalam Negara yang pesat membangun, pusat Bandar semakin berkembang. Jadi di sinilah dimana bagi sesetengah projek, kesan terhadap manusia diambil kira. Oleh itu, penilaian kesan sosial dijadikan sebagai salah satu proses yang harus dijalankan. Kajian penilaian kesan sosial terhadap pembangunan Bandar ini dijalankan di Malaysia. Semasa melakukan kajian ini, borang kaji selidik diedarkan kepada firma pembinaan,badan kerajaan dan semua pihak yang terlibat dalam industri pembinaan. Tujuan utama kajian ini adalah untuk mengetahui cara penilaian kesan sosial digunakan pada masa dahulu. Ia juga bertujuan untuk mempertimbangkan bagaimana penilaian kesan sosial ke atas pembangunan bandar boleh diperbaiki dan cara yang terbaik ditekankan untuk cadangan serta prinsip umum untuk penilaian kesan sosial yang sesuai ke atas pembangunan bandar. Secara kesimpulannya, penilaian kesan sosial adalah amat penting dan harus diambil kira untuk pembangunan bandar. Penilaian kesan sosial di Malaysia boleh lagi diperbaiki untuk mengelakan kesan negatif terhadap sesebuah bandar.

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INTRODUCTION

1.1 Introduction

Social change is the consequence of almost any intrusion into the community life of any society. The intrusions can be in the form of specific development projects, or nonspecific, less tangible forms such as increased exposure to other cultures, technological change and so on. The social change that result intrusions into community life may be beneficial, but more commonly intrusions have undesirable or negative outcomes. Even change that in long run may have a positive effect on the social wellbeing of a community may have undesirable short term consequences.

Social impact assessment is the process of analyzing (predicting, evaluating and relecting) and managing the intended and unintended consequences on the human environment of interventions (policies, plans, programs, projects and other social activities) and social change processes as to create a more sustainable biophysical and human environment.

SIA is also understood to be an umbrella or overaching framework that embodies all human impacts including aesthetic impacts, archeological impacts, community impacts, cultural impacts, demographic impacts, development impacts, economic and fiscal impacts, gender assessment, health impacts, indigenous rights, infrastructural impacts, intuitional impacts, political impacts, poverty assessment, psychological impacts, resource issues, tourism impacts, and other impacts on societies.

The process of urban development in a naturally growing city or in a city with loose development control generally results in three types of physical developments, which are collectively called urban development forms (UDF). The definition of urban development form is as the manifestation of certain physical and spatial growth and development as a result of human activities in an urban area. In a similar way defines UDF as spatial patterns of human activities at a certain point in time. This implies that urban development forms are either planned or unplanned entities. This definition does not subscribe to land use as the primary determinant of urban form.

The planned, controlled or unplanned UDF can generally be manifested in a city by controlled residential cum commercial areas in the city center, unplanned peri-urban areas and planned satellite towns. For the purpose of energy consumption comparisons, development control and geographical location can perhaps be common denominators for these types of UDF. However, as reflected in their names, location is too weak to be considered as the main denominator for comparing energy consumption purpose, since it is too obvious that residential locations are the main governing variable for transport energy, as found in some studies.

1.2 Problem statement

In the cities of developing countries, the city's center is grown organically from an originally uncontrolled residential area that later encourages commercial activities to form mixed land use. As the city grows, the local authority regulates this area to become a controlled residential cum commercial area. Notes that planners are increasingly dealing with the problems of social impacts and accommodating complex mixes of land uses at close quarters, especially in central cores and at satellite nodes. One of the benefits of mixed land use is its ability to reduce transport energy by creating biking or walking communities due to the proximity of origins and destinations.

This is where for certain projects; impact on people can be by far the most important consideration. In such cases, a social impact assessment (SIA) is carried out as a part of the process, or sometimes as a parallel or separate review. This approach is too used to analyze the social impacts in urban development of a proposal on individuals and communities to enhance the positive effects. It also provided a framework to manage social change in urban development.

1.3Goals

The goals of the study are define and objective in order to achieve the goals. Several objectives have been identifying as follow:

- To assess the way SIA has been used in the past – specifically what is captured and what is missed and what were the principles, procedures and methods of SIA.
- To consider how social impact assessment in urban development could be improved
- To highlight best practice recommendations and general principals of social impact assessment that are relevant for urban development.

1.4 Scope of study

The scopes of this study have been determined in order to facilitate the literature study by focusing on certain field and specific. This study is to investigate the social impact assessment in urban development in Malaysia. From the investigation, we need to collect all the data needed. All the data collected, and we can know the social impact assessment in Malaysia. All the data is record using Microsoft excel.

1.5 Significant of Study

This study is to determine the social impact assessment in urban development in Malaysia. It is to know how the urban development will give impact to social in Malaysia. The study follows the objectives that have been stated.

1.6 Thesis Outline

This thesis consists of five chapters and is organized as follow:

Chapter 1 is the introduction of the thesis and includes the background of the project, problem statement, objectives, scope of study and followed by methodology.

Chapter 2 presents the literature review on the definitions of the Social Impact Assessment, the principal and the guideline and also the method use to determine the Social Impact Assessment.

Chapter 3 informs about methodology of this project. In this chapter, the Social Impact Assessment is determining by distribute questionnaire to the government and non government agencies. Then the data was collected and analyze using Microsoft axel.

Chapter 4 explains the result and the analysis of the questionnaire that collected. All of the data collected was explain. The questionnaire results are analyzed and presented.

Chapter 5 is conclusion. Overall conclusion of this project stated in this chapter together with some future recommendations.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Social impact assessment (SIA) is the process of assessing and managing the consequences of development projects, policies and decisions on people. Its objective is to identify the intended and unintended effects of planned interventions in order to develop sustainable management plans. SIA emerged as a separate field of applied social science due to the realization in the early days of NEPA 1969 that environmental impact assessments (EIAs) could not adequately address social issues. In the late 1970s, many developed countries and some developing countries adopted SIA as a means of addressing social issues arising from development initiatives. However, SIA remained basically an integral component of EIA and is yet to be as firmly established in environmental planning as EIA.

2.2 Definition of SIA

SIA was defined as follows:

> Social impact assessment in terms of 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 extraction), particularly in the context of the U.S. National Environmental Policy Act of 1969 or "NEPA" (P.L. 91-190, 42 U.S.C. 4371 *et seq*.).

Their 2003 definition is substantially similar, although broadening the scope to include private projects and state regulations as well as the federal setting (NEPA).

> In the 2003 version, social impact assessment is define in terms of efforts to assess, appraise or estimate, in advance, the social consequences that are likely to follow from proposed actions. These include: specific government or private projects, such as construction of buildings, siting power generation facilities, large transportation projects, managing natural resources, fish and wildlife; and preserving or leasing large tracts of land and the adoption of new policies and resulting plans and programs. The actions and their consequences are considered particularly in the context of the NEPA (P.L. 91-190, 42 U.S.C. 4371 *et seq*.) and state laws and regulations that reflect NEPA.

2.3 A Basic Model for Social Impact Assessment

The Link between Environmental Impact Assessment and Social Impact Assessment Impacts on the social environment resemble bio-physical impacts in several ways.

- Social and biophysical impacts can vary in desir- ability, ranging from the desirable to the adverse.
- They also vary in scale-the question of whether a facility will create 50 or 1000 jobs, for example, or will have the potential to spill 50 or 1000 gallons of toxic waste.
- Another consideration involves the extent of du-ration of impacts in time and space. Like bio-physical impacts, some social impacts can be of short duration, while others can last a lifetime; and some communities "return to normal" quite quickly once a source of disruption is removed, while other do not.
- Social impacts can also vary in intensity or severity, a dimension that is defined differently in different project settings, just as an objective biophysical impact (e.g., a predicted loss of 75 sea otters) might have a minor effect on populations in one location (e.g., off the coast of Alaska), while amounting to significant fraction of the remaining population in another location (e.g., off the cost of California).
- Similarly, there are differences in the degree to which both type of impacts are likely to be cu-mulative, at one extreme, or mutually counter-balancing, at the other.

It is important to consider the social equity or distribution of impacts across different populations. Just as the biological sections of EIS's devote par-ticular attention to threatened or endangered plant and wildlife species, the socioeconomic sections of EIS's must devote particular attention to the impacts on vulnerable

segments of the human population. Examples include the poor, the elderly, adolescents, the unemployed, and women; members of the minority and/or other groups that are racially, ethnically, or culturally distinctive; or occupational, cultural, political, or value-based groups for whom a given community, region, or use of the biophysical environment is particularly important.

In addition to the types of disturbances that can affect other species, humans are affected by changes in the distinctly human environment, including those associated with the phenomenon known as the social construction of reality. Persons not familiar with the social sciences are often tempted to treat social constructions as mere perceptions or emotions, to be distinguished from reality. Such a separation is not so easy to accomplish. We are careful to point out that the social construction of reality is characteristic of all social groups, including the agencies that are attempting to implement changes as well as the communities that are affected.

In the case of proposed actions that involve controversy, attitudes and perceptions toward a proposed policy change are one of the variables that must be considered in determining the significance of impacts. During controversies, participants are often tempted to dismiss the concerns of others as being merely imagined or perceived.

There are two important factual reasons not to omit such concerns from SIA's and EIS's, regardless of whether the views are widely accepted internally or come from an agency's critics. First, positions taken by all sides in a given controversy are likely to be shaped by (differing) perceptions of the policy or project, and the decision to accept one set of perceptions while excluding another, may not be scientifically defensible. Second, if the agency asserts that its critics are "emotional" or "misinformed," for example, it is guaranteed to raise the level of hostility between itself and community members and will stand in the way of a successful resolution of the problem.

In summary, some of the most important aspects of social impacts, involve not the physical relocation of human populations, but the meanings, perceptions, or social significance of these changes.

2.4 A Social Impact Assessment Framework

To predict what the probable impact of development will be, we seek to understand the past behavior of individuals and communities affected by agency actions, development, or policy changes. We use a comparative SIA method to study the course of events in a community where an environ-mental change has occurred, and extrapolate from that analysis what is likely to happen in another community where a similar development or policy change is planned. Put another way, if we wish to know the probable effects of a proposed project in location B, one of the best places to start is to assess the effects of a similar project that has already been completed in location A. Specific variables to access project impacts are shown later in this section.

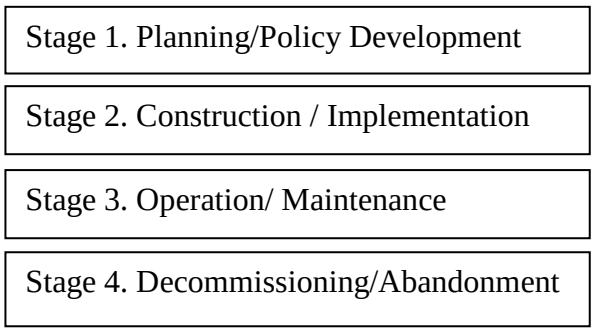

Figure 2.1: Stages in Project/Policy Development

Based on the direction outlined in NEPA and the CEQ Regulations, we need to identify probable un-desirable social effects of development before they occur in order to make recommendations for mitigation. The appropriate federal agency (in cooperation with the local community) bears responsibility for coordinating mitigation efforts. The SIA model also allows us to address the issues of alternative plans and alternative impacts of a proposed project. Moreover, because social impacts can be measured and understood, recommendations for mitigating actions on the part of the agencies can be made.

It is almost impossible to catalogue all dimensions of social impacts because change has a way of creating other changes. A freeway extension facilitates residential growth which leads to increased traffic and air pollution, creation of new schools, retail centers, and other services, and the decline of a downtown neighborhood.

Forecasted impacts are the difference in the human environment between the future with the project and a future without the project. Since we cannot see the future, we look at similar communities that have experienced similar policies or projects in the past. The social impact assessment model is comparative. The forecasts can be made about probable social impacts. The model also permits a restudy of the impacted community in the future to assess what the actual impact has been, so that the fit between forecasts and outcome can be matched.

One way to capture the dynamic complex quality of social impacts is to metaphorically take a series of snapshots over time as the development event or policy change unfolds and fills in what happened in between. Ideally, information about the community or geographic area of study is available both before and after the event to help in measurement. Social impacts then become the changes taking place between the two measurements points. The social assessor attempts to forecast the change associated with proposed activity, based on research and information

accumulated from comparative studies of similar situations.A strength of the comparative SIA model is that with appropriate data sources (those which can be collected frequently, such as land transfer records) it allows for an interpretation of dynamic events and can provide monitoring of short-term impacts. This kind of frequent monitoring provides a continual source of evaluation or check on the direction of forecasts made about social impacts.

2.5 Stage in Project/Policy Development

All projects and policies go through a series of steps or stages, starting with initial planning, then implementation and construction, carrying through to operation and maintenance (see Figure 2.1). At some point the project might be abandoned or decommisioned, or official policy could change. Social impacts will be different for each stage. Scoping of issues prior to analysis may lead the assessor to focus only on one stage. For example, one community might be concerned about public reaction resulting from initial siting of a hazardous waste disposal facility; another with the construction aspects of reservoirs; and a third might be faced with a change in the designation of adjacent public land from timber production to wilderness use. The specific stage in life of the project or policy is an important factor in determining effects. Not all social impacts will occur at each stage. Figure 2.1 illustrates the stages in project development.

2.5.1. Planning/Policy Development

Planning/policy development refers to all activity that takes place from the time a project or policy is conceived to the point of construction activity or policy implementation. Examples include project design, revision, public comment, licensing, the evaluating of alternatives, and the decision to go ahead. Social impacts actually begin the day the action is proposed and can be measured from that point.

Social assessors must recognize the importance of local or national social constructions of reality, which begin during the earliest of the four stages-the planning/policy development stage. We often assume that no impacts will take place until Stage 2 (construction/implementation) begins on a project -through dirt-moving operations, for example, or the start-up of construction activities. However, real, measurable, and often significant effects on the human environment can begin to take place as soon as there are changes in social or economic conditions. From the time of the earliest announcement of a pending policy change or rumor about a project, both hopes and hostilities can begin to mount; speculators can lock up potentially important properties, politicians can maneuver for position, and interest groups can form or redirect their energies. These changes occur by merely introducing new information into a community or region.

2.5.2 Construction/Implementation

The construction/implementation stage begins when a decision is made to proceed, a permit is issued or a law or regulation takes place. For typical construction projects, this involves clearing land, building access roads, developing utilities, etc. Displacement and relocation of people, if necessary, occurs during this phase.

Depending on the scale of the project, the buildup of a migrant construction work force also may occur. If significant in-migration occurs, the new residents may create a strain on community infrastructure, as well as creating social stresses due to changing patterns of social interaction. Communities may have difficulties in responding to the increased demands on school, health facilities, housing and other social services. Further stresses may be created by resentments between newcomers and long-time residents, by sudden increases in the prices for housing and local services, and even by increased uncertainty about the future. When new policies are implemented, local economies and organizations may change, and old behaviors are replaced with new ways of relating to the environment and its resources.

2.5.3. Operation/Maintenance

The operation/maintenance stage occurs after the construction is complete or the policy is fully operational. In many cases, this stage will require fewer workers than the construction/implementation phase. If operations continue at a relatively stable level for an extended period of time, effects during this stage can often be the most beneficial of those at any stage. Communities seeking industrial development will often focus on this stage because of the long-term economic benefits that may follow from a development. It is also during this stage that the communities can adapt to new social and economic conditions, accommodation can t take place, and the expectations of positive effects-such as stable population, a quality infrastructure, and employment opportunities-can be realized.

2.5.4. Abandonment/Decommissioning

Abandonment/decommissioning begins when the proposal is made that the project or policy and associated activity will cease at some time in the future. As in the planning stage, the social impacts of decommissioning begin when the intent to close down is announced and the community or region must again adapt, but this time to the loss of the project or an adjustment to a policy change. Some-times this means the loss of the economic base as a business closes its doors. At other times, the disruptions to the local community may be lessened or at least altered if one type of worker is replaced by another.

2.6 The Project Type and Setting

Projects and policy decisions which require and benefit from social impact assessment range from prison and plant sitings, to highway, reservoir, and power plant construction, to managing old growth forests to maintain a biologically diverse region. Accordingly projects types may range from isolated wilderness areas to urban neighborhoods, each with special characteristics that can affect social impacts. Social impacts (as well as economic and physical changes) will vary depending upon the type of development. The following examples or projects types, settings, and policy changes are taken from the Digest of Environmental Impact Statements, published by The Information Resource Press:

- Mineral extractions, including surface and underground mining as well as new oil and gas drilling.
- Hazardous and sanitary waste sites, including the construction and operation of disposal sites for a variety of hazardous and sanitary wastes (also included are facilities that burn or otherwise destroy chemical and toxic wastes).

- Power plants, including both unclear and fossil fuel electrical generating facilities and associated developments.
- Reservoirs, including all water impoundments for flood control, hydropower, conservation, and recreation; and cooling lakes and diversion structures. Industrial plants (manufacturing facilities built and operated by the private sector, e.g., refineries, steel mills, assembly lines).
- Land use designations, e.g., from timber production to wilderness designation.
- Military and governmental installations, including base closures and openings.
- Schools, public and private, including primary, secondary, and university.
- Transportation facilities, including airports, streets, terminals.
- Linear developments, including subways, railroads, power lines, aqueducts, bike paths, bridges, pipelines, sewers, fences, walls and barrier channels, green belts, and waterways.
- Trade facilities, including businesses and shopping centers.
- Designation of sacred sites.
- Parks and preserves, refuges, cemeteries, and recreation areas.
- Housing facilities, including apartments, office buildings, and hospitals.

2.7 Identify 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:

1. Population Characteristics
2. Community and Institutional Structures
3. Political and Social Resources
4. Individual and Family Changes
5. Community Resources

1. 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.

2. 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.

3. 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.

4. 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.

5. Community Resources 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.

2.8 Steps in the Social Impact Assessment Process

The social impact assessment itself should contain the ten steps outlined in Figure 1. These steps are logically sequential, but often overlap in practice. This sequence is patterned after the environmental impact assessment steps as listed in the CEQ guidelines.

2.8.1. Public Involvement - Develop an effective public plan to involve all potentially affected publics.

This requires identifying and working with all potentially affected groups starting at the very beginning of planning for the proposed action. Groups affected by proposed actions include those who live nearby; those who will hear, smell or see a development; those who are forced to relocate because of a project; and those who have interest in a new project or policy change but may not live in proximity. Others affected include those who might normally use the land on which the project is located (such as farmers who have to plow around a transmission line). Still others include those affected by the influx of seasonal residents who may have to pay higher prices for food or rent, or pay higher taxes to cover the cost of expanded community services. Once identified, representative from each group should be systematically interviewed to determine potential areas of concern/impact, and ways each representative might be involved in the planning decision process. Public meetings by themselves are inadequate for collecting information about public perceptions. Survey data can be used to define the potentially affected population. In this first step, the pieces are put in place for a public involvement program which will last throughout the environmental and social impact assessment process.

2.8.2. Identification of Alternatives - Describe the proposed action or policy change and reasonable alternatives.

In the next step, the proposed action is described in enough detail to begin to identify the data requirements needed from the project proponent to frame the SIA. At a minimum, this includes:

- Locations
- Land requirements
- Needs for ancillary facilities (roads, transmission lines, sewer and water lines)
- Construction schedule
- Size of the work force (construction and operation, by year or month)
- Facility size and shape
- Need for a local work force
- Institutional resources

The list of social impact assessment variables is a guide for obtaining data from policy or project proponents. Sometimes the description of the proposed alternatives may not include all the information needed for an SIA. Another problem is the provision of summary numbers when disaggregated numbers are needed. For example, the social assessor may be given numbers for the total peak work force of a construction project, when information is needed on local, in migrating, and nonlocal commuting workers for each phase of construction.

2.8.3. Baseline Conditions - Describe the relevant human environment/area of influence and baseline conditions.

The baseline conditions are the existing conditions and past trends associated with the human environment in which the proposed activity is to take place. This is called the baseline study. For construction projects, a geographical area is identified along with the distribution of special populations at risk; but for programs, policies, or technology assessments, the relevant human environment may be a more dispersed collection of interested and affected publics, interest groups, organizations, and institutions. The generic set of dimensions for investigation listed below would include the following aspects of the human environment for construction projects and geographically-located programs and policies.

- Relationships with the biophysical environment, including ecological setting; aspects of the environmentseen as resources or problems; areas having economic, recreational, aesthetic or symbolic significance to specific people; residential arrangements and living patterns, including relationships among com-munities and social organizations; attitudes toward environmental features; and patterns of resource use.
- Historical background, including initial settlement and subsequent shifts in population; developmental events and eras, including experience with boom-bust effects, as well as a discussion of broader employment trends; past or ongoing community controversies, particularly those involving technology or the environment; and other experiences likely to affect the level of distribution of the impacts on local receptivity to the proposed action.
- Political and social resources, including the distribution of power and authority; the capacities of relevant systems or institutions (e.g., the school system); friendship networks and patterns of cleavage or cooperation among potentially affected groups; levels of residential stability; distributions of socio-demo-graphic characteristics such as age and ethnicity; presence of distinctive or potentially vulnerable groups (e.g., low income); and linkages among geo-political units (federal, state, county, local and inter-local).

- Culture, attitudes and social-psychological conditions, including attitudes toward the proposed action; trust in political and social institutions, perceptions or risks; relevant psychological coping and adjustment capacity; cultural cognition of society and environment; assessed quality of life; and improvement values that may be relevant to or affected by the proposed action.
- Population characteristics including the demo-graphics of relevant groups (including all significant stakeholders and sensitive populations and groups); major economic activities; future prospects; the labor markets and available work force; unemployment and underemployment; population and expected changes; availability of housing, infrastructure and services; size and age structure of households; and seasonal migration patterns.

The level of effort that is devoted to the description of the human environment should be commensurate with the size, cost, and degree of expected impacts of the proposed action. At a minimum, the existing literature on comparable or analogous events, knowledgeable experts, and readily available documents such as government reports should be consulted. On-site investigations and the use of previous field studies and surveys are recommended, as well as rapid appraisals and mini-surveys.

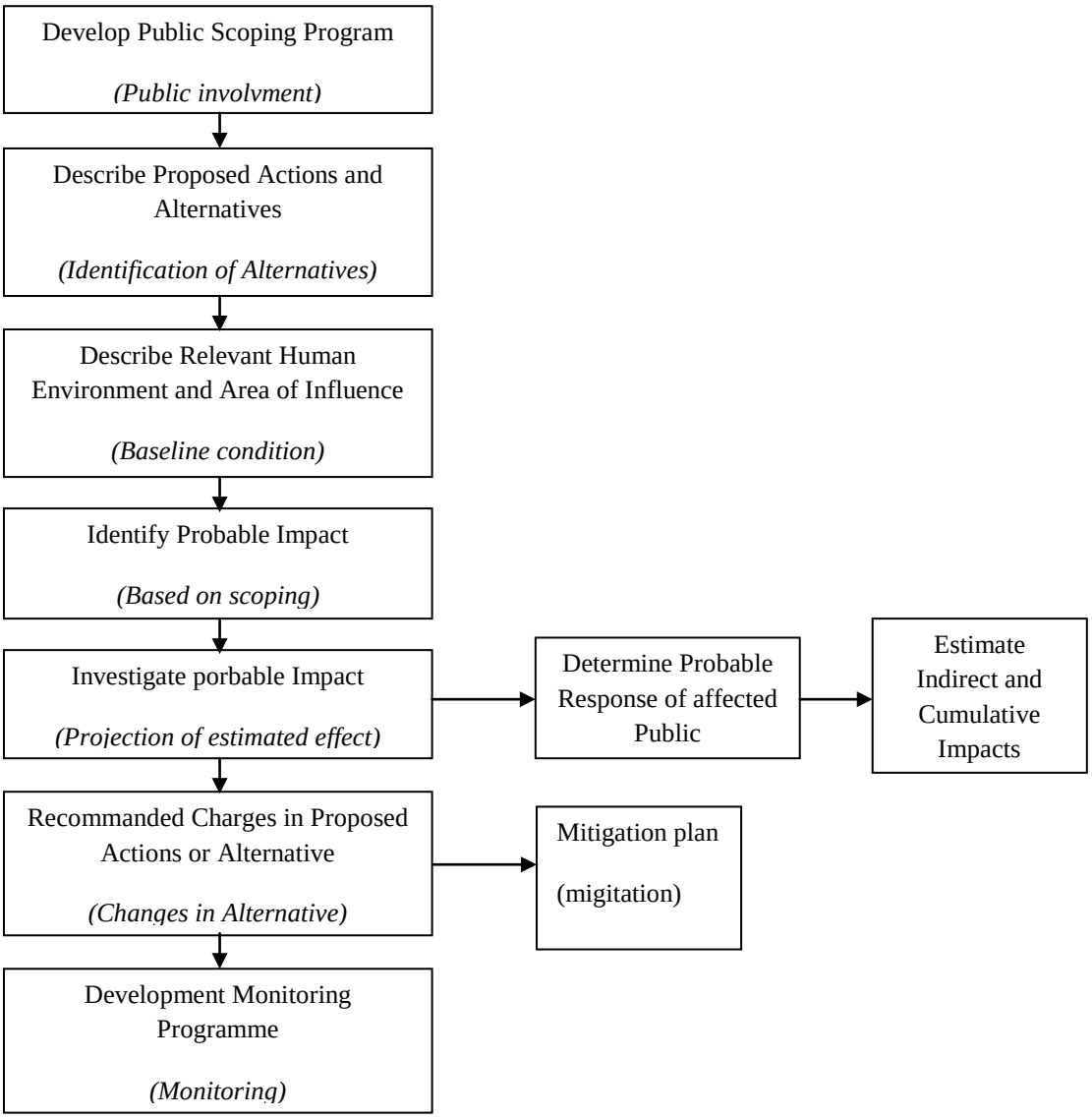

Figure 2.2: Steps in the Social Impact Assessment Process

2.8.4. Scoping - After obtaining a technical under-standing of the proposal, identify the full range of probable social impacts that will be addressed based on discussion or interviews with numbers of all potentially affected.

After initial scoping, the social impact assessor selects the SIA variables for further assessment situations. Consideration needs to be devoted both to the impacts perceived by the acting agency and to those perceived by affected groups and communities. The principal methods to be used by experts and interdisciplinary terms are reviews of the existing social science literature, public scoping, public surveys, and public participation techniques. It is important for the views of affected people to be taken into consideration. Ideally, all affected people or groups contribute to the selection of the variables assessed through either a participatory process or by review and comment on the decision made by responsible officials and the interdisciplinary team. Relevant criteria for selecting significant impacts comparable to those spelled out in the CEQ Regulations include the:

- Probability of the event occuring;
- Number of people including indigenous populations that ill be affected;
- Duration of impacts (long-term vs. short-term);
- Value of benefits and costs to impacted groups (intensity of impacts);
- Extent that the impact is reversible or can be mitigated;
- Likelihood of causing subsequent impacts;
- Relevance to present and future policy decisions;
- Uncertainty over possible effects; and
- Presence or absence of controversy over the issue.

2.8.5. Projection of Estimated Effects - Investigate the probable impacts.

The probable social impacts will be formulated in terms of predicted conditions without the actions (baseline projection); predicted conditions with the actions; and predicted impacts which can be interpreted as the differences between the future with and without the proposed action. Investigation of the probable impacts involves five major sources of information:

1) Data from project proponents;
2) Records of previous experience with similar actions as represented in reference literature as well as other EIS's;
3) Census and vital statistics;
4) Documents and secondary sources;
5) Field research, including informant interviews, hearings, group meeting, and surveys of the general population.

The investigation of the social impacts identified during scoping is the most important component. Methods of projecting the future lie at the heart of social assessment, and much of the process of analysis is tied up in this endeavor. In spite of the long lists of methods available, most fall into the following categories:

- **Comparative method;**
- **Straight-line trend projects** taking an existing trend and simply projecting the same rage of change into the future);
- **Population multiplier methods**(each specified increase in population implies designated multiples of some other variable, e.g. jobs, housing units);
- **Scenarios**(1) logical-imaginations based on construction of hypothetical futures through a process of mentally modeling the assumptions about the variables in question; and (2) fitted empirical-similar past cases used to analyze the present case with experts adjusting the scenario by taking into account the unique characteristics of the present case;

- **Expert testimony**(experts can be asked to present scenarios and assess their implications);
- **Computer modeling** (involving the mathematical formulation of premises and a process of quantitative weighing of variables);
- **Calculation of "future foregone"** " (a number of methods have been formulated to determine what options would be given up irrevocably as a result of a plan or project, e.g., river recreation and agricultural land use after the building of a dam).

The record of previous experiences is very important to the estimation of future impacts. It is largely contained in case reports and studies and the experience of experts. Variations in the patterns of impacts and responses in these cases also should be registered. Expert knowledge is used to enlarge this knowledge base and to judge how the study case is likely to deviate from the typical patterns. The documents and secondary sources provide information on existing conditions, plans, reported attitudes and opinions; and contribute to the case record. The field research involves interviews with persons who have different interests at stake, different perspectives, and different kinds of expertise. Wherever feasible, it should also involve a search through a wide range of documentation that is often available (in forms that range from official statistics and the minute of meeting to the patterns of coverage and letters to the editors). The opinions of various individuals and groups toward the proposed change should also be part of the record. Surveys are valuable to assess public opinion properly, because spokes-persons for groups do not always represent the views of the rank-and-file. Statements at public meeting and by spokespersons should not be used as projections, but as possible impacts to be evaluated through other means.

2.8.6. Predicting Responses to Impacts - Determine the significance to the identified social impacts.

This is a difficult assessment task often avoided, but the responses of affected parties frequently will have significant subsequent impacts. After direct impacts have been estimated the assessor must next estimate how the affected people will respond in terms of attitude and actions. Their attitudes before implementation predicts their attitudes afterwards, though there are increasing data that show fears are often overblown and that expected (often promised) benefits fail to meet expectations. This literature should be consulted.

The actions of affected groups are to be estimated using comparable cases and interviews with affected people about what they expect to do. So much depends on whether local leader-ship arises (and the objectives and strategies of these leaders), that this assessment step often is highly uncertain, but at least policy makers will be notified of potential problems and unexpected results.

This step is also important because adaption and response of affected parties can have consequences of their own-whether for the agency that proposes an action (as when political pro-tests stalls a proposal) or for the affected com-munities, whether in the short-term or in the long-term.

Patterns in previous assessments guide this analysis, and expert judgment and field investigations are used to see whether they study case in following the typical patterns or how it is developing uniquely. Being able to show potentially affected people that significant impacts are being incorporated into the assessment is critical to the success of this step.

2.8.7. Indirect and Cumulative Impacts - Estimate subsequent impacts and cumulative impacts.

Indirect impacts are those caused by the direct impacts; they often occur later than the direct impact, or farther away. Cumulative impacts are those impacts which result from the incremental impacts of an action added to other past, present, and reasonably foreseeable future actions regard-less of which agency or person undertakes them. A community residential and retail growth and pressures on government services following the siting of a major project are examples of indirect and cumulative impacts. While they are more difficult to estimate precisely than direct and cumulative impacts be clearly identified in the SIA.

2.8.8. Changes in Alternatives - Recommended new or changed alternatives and estimate or project their consequences.

Each new alternative or recommended change should be assessed separately. The methods used in step five (estimation), apply here but usually on a more modest scale. More innovative alternatives and changes probable should be presented in an experimental structure. Expert judgment and scenarios are helpful in developing project and policy alternations. The number of iterations here will depend upon time, funding, and the magnitude of the project or policy changes.

2.8.9. Mitigation - Develop a mitigation plan.

A social impact assessment not only forecasts impacts, it should identify means to mitigate adverse impacts. Mitigation includes avoiding the impact by not taking or modifying an action; minimizing, rectifying, or reducing the impacts through the design or operation of the project or policy; or compensating for the impact by providing substitute facilities, resources, or opportunities. Ideally, mitigation measures are built into the selected alternative, but it is appropriate to identify mitigation measures even if they are not immediately adopted or if they would be the responsibility of another person or government unit. We suggest a sequencing strategy to manage social impacts modeled after one used with wet-land protection and other natural resource issues. During the first sequence, wetlands managers strive to avoid all adverse impacts. In the second sequence, managers strive to minimize any adverse impacts that cannot be avoided. During the third sequence, managers compensate for adverse impacts. Compensation for the loss of a wetland, for example, could be to acquire a different wetland, enhance a degraded site, or create a new wetland. The amount of compensation can be based on the type of wetland or resource lost, the severity of the impact, and the location of the wetland mitigation site.

The two steps of sequencing-avoiding and minimizing-can apply to the project itself or to the host community or the impacted region. For example, the project may be revised to avoid or minimize adverse social impacts (e.g., extend the construction period to minimize in-migration), or the community may be able to take steps to attenuate, if not avoid, and adverse effects. Application of the sequencing concept for the mitigation of adverse social impacts requires that the assessor first rank the level of importance of each significant SIA variable determined during the estimated effects step.

The first step in evaluating potential mitigation for each variable is to determine whether the proponent could modify the project or pro-posed policy to avoid the adverse effects. For example, a road that displaces families could be rerouted. The next step in the sequencing process is to identify ways to minimize adverse social impacts. For example, most citizens are uncomfortable with the idea of locating a perceived as undesirable facility near their com-munity. Attitudes (particularly negative ones) formed about the project cannot be eliminated, but might be moderated if the public has complete information about the proposed development, are included in the decision making process, or are provided with structural arrangements that assure safe operations.

There are at least three benefits of identifying unresolvable social impacts that may result from a proposed project. The first is identifying methods of compensating individuals and the community for unavoidable impacts, the second occurs when the community may identify ways of enhancing other quality of life variables as compensation or the adverse effects. The third happens when the identification of unresolvable social impacts makes community leaders and project proponents more sensitive to the feelings of community residents. By articulating the impacts that will occur and making efforts to avoid or minimize the adverse consequences, or compensating the residents or the community for the losses, benefits may be enhanced and avoidable conflicts can be managed or minimized.

2.8.10. Monitoring and develop a monitoring program.

A monitoring program should be developed that is capable of identifying deviations from the proposed action and any important unanticipated impacts. A monitoring plan should be developed to 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 impacts larger than the projections occur.

Monitoring programs are particularly necessary for projects and programs that lack detailed information or that have high variability or uncertainty. It is important to recognize, in advance, the potential for "surprises" that may lie completely outside the range of options considered by the SIA. If monitoring procedures cannot be adequately implemented, then mitigation agreements should acknowledge the un-certainty faced in implementing the decision.

2.9 Principles for Social Impact Assessment

In general, there is consensus on the types of impacts that need to be considered (social, cultural, demo-graphic, economic, social-psychological, and often political impacts); on the need for the SIA to include a discussion of the proposed action (i.e., the proposed facility, project, development, policy change, etc.); on the components of the human environment where the impacts are likely to be felt (affected neighbor-hoods, communities, or regions); on the likely impacts (generally defined as the difference between the likely future of the affected human environment with versus without the proposed policy and project); and on the steps that could be taken to enhance positive impacts and to mitigate any negative ones (by avoiding them, if possible, by modification and minimization, and by providing compensation for any negative impacts that cannot be avoided or ameliorated).

As SIA textbooks point out Brudge, 1994; Branch et.al., 1984; Finsterbusch, 1980; Freudenburg, 1986; Taylor, et.al., 1990) and as suggested by the Council of Environmental Quality (CEQ) Regulations for Implementing the

Procedural Provisions of NEPA (U.S. Council on Environmental Quality, 1986) the SIA practitioner should focus on the more significant impacts, should provide quantification where feasible and appropriate, and should present the social impacts in a manner that can be understood by decision-makers and community leaders. The following principles augment the guidance provided in earlier sections. These principles are benchmarks for conducting an SIA. They include the:

- Joint role of SIA and public involvement in identifying affected groups;
- Concept of impact equity (whoe "wins" and who "loses") as it concerns sensitive groups;
- Focus of an SIA of the possible impacts identified by the affected public and impacts identified through social science expertise;
- Explicit identification methods, assumptions, and determination of significance;
- Feedback to project planners;
- Use of SIA practitioners to do SIA;
- Establishment of mitigation and monitoring or as joint agency-community responsibility;
- Identifying appropriate data source for SIA; and
- Planning for gaps in data.

2.9.1. Involve the Diverse Public and Identify and involve all potentially affected groups and individuals.

A public involvement and conflict management program can beneficially be closely integrated with the development of the social impact assessment process. A lack of understanding still exists among many decision-makers as to how public involvement fit within the planning process. Public involvement can complement and fit within SIA process by identifying potentially affected groups, and by interpreting the meaning of impacts for each group. Public involvement plays an important role

in recruiting participants for the planning process who are truly representative of affected groups. Public involvement should be truly interactive, with communication flowing both ways between the agency and affected groups.

2.9.2. Analyze Impact Equity and Clearly identify who will win or who will lose, and emphasize vulnerability under-represented groups.

Impacts should be specified differentially affected groups and not just measured in the aggregate. Identification of all groups likely to be affected an agency action is central to the concept of impact equity. There can always be winners and losers as the result of a decision to construct a dam, build a highway or close an area to timber harvesting, However, no category of persons, particularly those that might be considered more sensitive or vulnerable as a result of age, gender, ethnicity, race, occupation or other factors, should have to bear the brunt of adverse social impacts. While most proposed projects or policies are not zero-sum situations, and there may be varying benefits for almost all involved, SIA has a special duty to identify those whose adverse impacts might get lost in the aggregate benefits.

The impact assessment practitioner must be attentive to those groups that lack political efficacy; such as groups low in political or economic power which often are not heard, or do not have their interests strongly represented. Examples abound in the literature of groups that could be considered sensitive, vulnerable, or low in power. The elderly have been identified as a category of persons sensitive to involuntary displacement and relocation. Children have suffered learning problems resulting from long-term exposure to various forms of transportation noise and local pollution (e.g., vehicular traffic, airports). Minorities and the poor are disproportionately represented in groups low in power; low-income; minority neighborhoods frequently were targeted in the 1960's as optimal sites for road construction and similar public

works projects. Persons with some form of disability or impairment constitute another sensitive category with important needs. Farmers often are affected by transmission lines, water projects or developments that take large amounts of land. The special impacts to those persons should be high-lighted in an SIA, not lost in summary statistics.

2.9.3. Focus the Assessment and Deal with issues and public concerns that really count, not those that are just easy to count. Impacts Identified by the Public.

Social impact assessment practitioners must contend with stringent time and resource constraints that affect the scope of the assessment and how much can be done in the time available. Given such constraints, a central question emerges: "If you cannot cover the social universe, what should you focus on?" The answer is to focus on the most significant impacts in order of priority, and all significant impacts for all impacted groups must be identified early using a variety of rapid appraisal or investigative techniques. Clearly, impacts identified as important by the public must be given heigh priority. Many of these will surface during the NEPA scoping process or earlier if a survey is used to identify the potentially-affected populations. However, as noted earlier, some group lows in power that may be adversely affected do not necessarily participate in early project stages. It is essential that broadly-based public involvement occurs throughout the life of the SIA; but additional means (e.g., key informants, participant observation, and where possible, surveys) often must be used to ensure that the most significant public concerns are addressed.

2.9.4. Identify Methods and Assumptions and Define Significance and Describe how the SIA is conducted, what assumptions are used and how significance is determined.

The methods and assumptions used in the SIA should be made available and published prior to a decision in order to allow decision makers as well the public to evaluate the assessment of impacts (as required by NEPA). Practitioners will need to consult the CEQ Regulations. Definitions and examples of effects (direct, indirect, and cumulative) are provided in 40 CFR 1508.7 and 1508.8; "effects" and "impacts" are used synonymously. The CEQ regulations are clear that an environmental impacts statement has to focus on impacts found to be significant.

Context includes such considerations as society as a whole, affected regions, affected interests and locality (e.g., when considering site-specific projects, local impacts assume greater importance than those of a regional nature).

2.9.5. Project Planners and Identify problems that could be solved with changes to the proposed action or alternatives.

Provide Feedback on Social Impacts to Findings from the SIA should feed back into project design to mitigate adverse impacts and enhance positive ones. The impact assessment, therefore, should be designed as a dynamic process involving cycles of project design, assessment, redesign, and reassessment. This process is often carried out informally with project designers prior to publication of the draft assessment for public comment; public comments on a draft EIS can contribute importantly to this process of feedback and modification.

2.9.6. Use SIA Practitioners and Trained social scientists employing social science methods will provide the best results.

The need for professionally qualified, competent people with social science training and experience cannot be overemphasized. An experienced SIA practitioner will know the data, and be familiar and conversant with existing social science evidence pertaining to impacts that have occurred elsewhere, which may be relevant to the impact area in question. This breadth of knowledge and experience can prove invaluable in identifying important impacts that may not surface as public concerns or as mandatory considerations found in agency NEPA compliance procedures. A social scientist will be able to identify the full range of important impacts and then will be able to select the appropriate measurement procedures.

Having social scientist as part of the interdisciplinary EIS team will also reduce the probability that an important social impact could go unrecognized. In assessing social impacts, if the evidence for a potential type of impact is not definitive in either direction, then the appropriate conservative conclusion is that it cannot be ruled out with confidence. In addition, it is important that the SIA practitioner be conversant with the technical and biological perspectives brought to bear on the project, as well as t he cultural and proecdural context of the agency they work with.

2.9.7. Establish Monitoring and Mitigation Program and Manage uncertainty by monitoring and mitigation adverse impacts.

Crucial to the SIA process is monitoring significant social impact variables and any programs which have been put into place to mitigate them. As indicated

earlier, the identification of impacts might depend on the specification of contingencies. For example, if the in-migration of workers during the construction phase work force is 1000, then the community's housing will be inadequate to meet the need, but if it is only 500, then the impact can be accommodated by currently vacant units.

Identifying a monitoring infrastructure needs a key element of the local planning process. Two key points: **a)** Monitoring and mitigation should be a joint agency and community responsibility. **b)** Both activities should occur on an iterative basis throughout the project life cycle. Depending on the nature of the project and time horizons for completion, the focus of long-term responsibility for monitoring and mitigation is not easily defined. Research shows that trust and expertise are key factors in choosing the balance between agency and community monitoring participation. Few agencies have the resources to continue these activities for an extended period, but local communities should be provided resources to assume a portion of the monitoring and mitigation responsibilities.

2.9.8. Identify Data Source and Published scientific literature, secondary data, and primary data from the affected area.

These three sources should be consulted for all SIA's. Balance among the three may vary according to the type of the proposed action, as well as specific considerations noted below, but all three will be relevant.

Published Scientific Literature and The SIA should draw on existing, previously reviewed and screened social science literature which summarizes existing knowledge of impacts based on accepted scientific standards.

Examples include journal articles, books, and reports available from similar projects. A list of easy-to-obtain, recommended sources is provided at the end of this monograph. Existing documentation is useful in identifying which social impacts are likely to accompany a proposed action. When it is possible to draw potentially competing interpretations from the existing literature, the SIA should provide a careful discussion of relative methodological merits of available studies.

Therefore, consideration of existing literature should err on the side of inclusiveness, not on exclusion of potentially relevant cases. Caution is needed when the SIA presents a conclusion that is contradicted by the published literature; in such cases, the reasons for the differences should be explicitly addressed. Anthropological data on rural and ethnically- and racially-diverse communities is best understanding the cultural context of the impacted community.

Secondary Data Sources -The best known secondary sources of these are the Census, vital statistics, geographical data, relevant agency publications, and routine data collected by state and federal agencies. Examples of other secondary data sources include agency caseload statistics (e.g., from mental health centers, social service agencies and other human service providers, law enforcement agencies, and insurance and financial regulatory agencies); published and unpublished historical materials (often available in local libraries, historical societies, and school district files); complaints produced by booster and/or service organizations (such chambers of commerce, welcome wagon organizations, and church groups); and the files of local news-papers. These secondary sources can be used in conjunction with key-informant interviews, to allow for verification of informant memories and to be alert for potential sources of bias in other data.

Primary Data from the Affected Area-Survey research, oral histories and informant interviews are examples of primary data which may be collected to verify other data sources. If a social assessor concludes that community impacts will differ

from those documented elsewhere, such conclusions must be based on the collection and analysis of primary data which specifically show why such alternative conclusions are more credible. Also, local residents often have important forms of expertise, both about local socioeconomic conditions and about the broader range of likely impacts. Because of its unique history and structure, each community may react to a development event policy change differently than other communities.

2.9.9. Plan for Gaps in Data

SIA practitioners often have to produce an assessment in the absence of all the relevant or even the necessary data. The three elements of this principle are intended to supplement the guidance already provided by CEQ Regulations

Only if the relevant information "cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known," is the EIS permitted a gap in relevant information. In such cases, however, the EIS needs to include: 1) a statement of relevance of the incomplete or unavailable information 2) a summary of existing credible scientific evidence [that] is relevant, and 3) the agency's evaluation of the likely and possible impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

The following three elements are acceptable procedures to the social science community when there are shortages of resources necessary to do the desired data collection.

2.9.9.1 It is more important to identify likely social impacts than to precisely quantify the more obvious social impacts.

All assessors strive to identify and quantify significant impacts, thereby providing decision makers and the affected publics with information that is both as complete and as accurate as possible. In cases where the desirable goal cannot be met, it is better to be roughly correct on important issues than to be precisely correct on unimportant issues Within the context of the social impact statement, there are two important differences between impact identification (what are the general categories or types of impacts that are likely to occur and impact evaluation (precisely how significant and those impacts likely to be).

Research has identified the social impacts of many types of actions, and experienced SIA practitioner can identify plausible and potentially significant impacts relatively quickly and efficiently. On the other hand, an accurate evaluation is a resource-intensive process and deals with the question of significance. Research on the decision-making process has found that experts and policy makers were particularly prone toward premature closure. Given a partial listing of potential impacts experts tended to assume they have been given a complete list and in most cases, failed to recognize the potential impacts that had been omitted from consideration. While empirical estimates can appear to be quite precise, demographic and economic projections have been shown by empirical analysis to have an average absolute error in the range of 50-100 percent. We support the use of qualitative and quantitative measures of social impact assessment variables, but realize that the evaluation of significance has an important judgment component.

2.9.9.2 It is important to be on the "conservative" side in reporting likely social impacts.

The purpose of the EIS is to provide an evenhanded treatment of the potential impacts, offering a scientifically reasonable assessment of the probable impacts in advance of the development event. It is a very different matter from providing solid proof of impacts after the impacts occur and all the evidence is in All EIS's and SIA's are by their nature anticipatory. Questions about the "prooof" of impacts can be asked in an apparently scientific language, but cannot be answered with the true confidence in advance of the actions in question. In assessing social and economic impacts, accordingly, if the evidence for a potential type of impact is not definitive in either direction, the conservative conclusion is that the impact cannot be ruled out with confidence, not that the impact is not proven. In cases of doubt, in terms of statistical terminology, the proper interpretation for power or sensitivity, and not for the strength of consistency of an association.

2.9.9.3 The less reliable data there are on the effects of the projects or policy change, the more important it is to have SIA work performed by competent, professional social scientists.

Resource limitations will not always allow for SIA's to be done by experienced social scientists. The two following situations are ones in which it may be appropriate to proceed without professional social scientists' involvement in an SIA.

1) In cases where proposed actions are considered by persons within the agency with social science training, and by those in the potentially affected community, to likely cause only negligible or ephemeral social impacts.

2) In cases where a significant body of empirical findings is available from the social science literature, which can be applied fairly directly to the proposed action in question, and is referenced, summarized, and cited by the person(s) preparing the SIA section of the EIS. If one of these two conditions is not present, the absence of professional social science expertise would be imprudent for both the agency and affected groups and communities; and SIA would be speculative and not well grounded. If one of these two conditions is not present, the absence of professional social science expertise would be imprudent for both the agency and affected groups and communities; and SIA would be speculative and not well grounded.

CHAPTER 3

METHODOLOGY

3.1 Introduction

Malaysia has successfully applied economic planning to guide the development of the country from an economy of agriculture and mining to a largely industrialised one. Now, with itssights set on attaining the economic level of a fully developed nation by 2020, the planning system must be made even more efficient and focused. It must ensure that every investment made in the country, contribute towards creating the desirable objective of a strong, modern, internationally competitive, technologically advanced, post-industrial economy. Cities in Malaysia must also be fully aware of the enormous competition it faces in a region with rapidly expanding and modernising economies, all contending for the same pool of potential international investments. Efficiency of urban governance is also fundamental issue in development characterized by sustainability, subsidiarity, equity, transparency and accountability, civic engagement and citizenship, and security. As described above, city competitiveness is harnessed through ‘city marketing and city management’. High technology and high skilled industries, together with finance, transportation, tourism, business, information and professional services shopping and other commercial activities, are the principal components of

the nation's economy, which must be developed to a level well beyond where it is now. In this respect, Kuala Lumpur being the premier city must play the leading role.

Vision 2020 targets Malaysia to be developed nation economically, socially, politically and spiritually by year 2020. The manifestation and aspiration of Vision 2020 sets the framework for which development is to be steered. The nation is now in its second phase of development towards achieving the Vision. Rapid globalisation, progression in science and technology and the need to capitalise on knowledge-based economy requires the country to have a strong foundation in order to be competitive with other nations. In this context, the direction of development has to be planned and managed systematically and comprehensively to induce the country's capacity to compete globally. The urban sector is an important catalyst towards national economic growth and a vital investment centre for the nation. Apart from being a centre for social and recreation, urban sector plays an important role in attracting local and foreign investors in economic activities. Therefore, cities must be able to provide a good and competitive environment, complemented with all forms of activities within its territory. Peninsular Malaysia is expected to experience a rapid process of urbanisation by year 2020, with a majority of the population being urbanized. The increase in population means additional space is required for housing, public amenities and infrastructure. Hence, development to be carried out should be able to bring a good return whilst priority being given to environmental protection, through a balanced and optimal use of national resources.

Urbanisation issues is being emphasized by the government, among other, are urban poverty the rising crime rate, solid waste disposal, housing for the poor, environmental protection, pollution etc. These issues need to be tackled holistically to ensure the role of urban centre as the engine of economic growth will be continuously maintained and enhanced. Cities need to be governed efficiently and effectively to promote a sustainable and conducive environment as a place of work and living. At the same time, the uniqueness of city should also the preserved to maintain its image and distinct identity.

3.2Method

For this project, there are several stage or process in the outlined methodology that needs to follow:

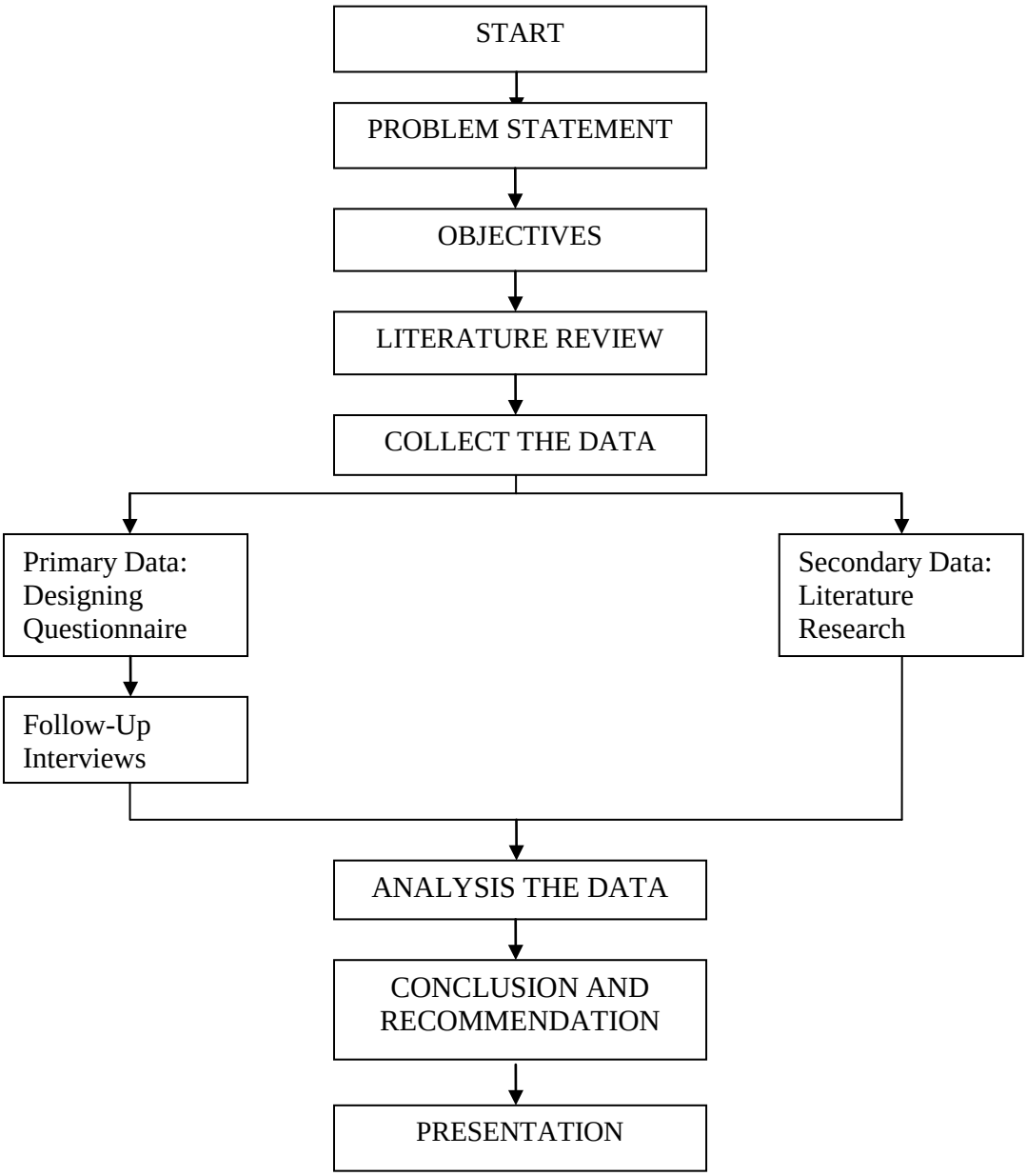

Figure 3.1: Study Methodology

3.3 Data collection

Two residential estatate in Malaysia has to be selected as example areas in a first study. Malaysia offers different urban structural conditions and social impact close to various kinds of urban development and several residential estates. One of the example areas is a new residential estate. The other is an old residential estate near the city centre. Both areas have a close association with urban area. The most important differences between them are the built-up density of the place. In both areas, the internal social impact and urban development structure at the fringe of the residential estates were registered (mapping) and categorized. The quantity of the people in the areas and natural culture were established by counts of the users on selected days of usually intensive use. This information should give the background for the final interviews of residents.

A questionnaire survey, will distribute randomly by hand to households (respondents) in two urban development forms. The respondents were given 1 week time to respond to the questionnaire, and only adult household's members were eligible to respond. The questionnaire explored the use of energy based on three key areas namely; activity level of the respondents, technology used and daily activities. Transport energy used for working, shopping, studying and leisure purposes was acquired. Two premises of urban energy use namely household, transport, and the daily activities were investigate.

The daily activities are investigate to know what they do in a week so the social impact of that place can be known on what they do and what they don't. Transport energy consumption, in the same manner, was calculated from the monthly consumption of gasoline or diesel for those having private vehicles. For the respondents who use public transport, the equivalent energy consumption was calculated from the distance of their travel from known origin to destination e.g. from home to work place. With current known level of efficiency of public transport,

the equivalent transport energy consumption was then calculated. This process was similarly carried out for all respondents living in three urban development forms in the study area.

A separate questionnaire was also randomly distributed to commercial and service sector in the three urban development forms to acquire the service activities. With those questionnaires, there were thereby two types of premises of the respondents, namely household respondents and commercial or service respondents. The first type of respondents was acquired to understand energy uses for household's purposes, and similarly, the second type of respondents was acquired to understand energy uses for commercial or service purposes. A single factor analysis of social impact in urban development forms was also employed to substantiate the influence of urban development forms on energy consumption.

CHAPTER 4

RESULT AND ANALYSIS

4.1 Introduction

In this chapter, analysis of social impact assessment in urban development according to Chapter 3. It will discuss the data from the questionnaire that have been distributed to the construction company and government firm. The related data was collected through site visit, questionnaire and interview. Information data regarding Social Impact Assessment in Urban Development have been analyzed using AI method. The feed back will be calculated and presenting in table and figure.

The analysis is divided into 3 objectives.

- To assess the way SIA has been used in the past
- To consider how social impact assessment in urban development could be improved.
- To highlight the best practice recommendation for social impact assessment.

4.2 Data collection

To achieve the objective, the questionnaires have been distributed by hand and by email. Questionnaires that send to the construction company and the consultant firm are 30. At the end, there are twenty (20) respondents who give their feedback. The number and percentage of respondents is shown in Table 4.1.

Table 4.1: Number of questionnaires returned

	Number of questionnaires		Percentage of return rate.
	Sent	Returned	
COMPANY	30	20	66.67%

The questionnaire is divided into four (3) parts which will answer the objectives of the study:

1.SECTION A: Personal particular
2. SECTION B: Level of knowledge of Social Impact Assessment
3. SECTION C: Relationship social impact assessment in urban development

4.3 Analysis section A

4.3.1 Analysis of Project and Respondent's Company Profile

Background information on the respondents and types of construction projects completed. The background information consists of data on the company's name, position of respondent, current project.

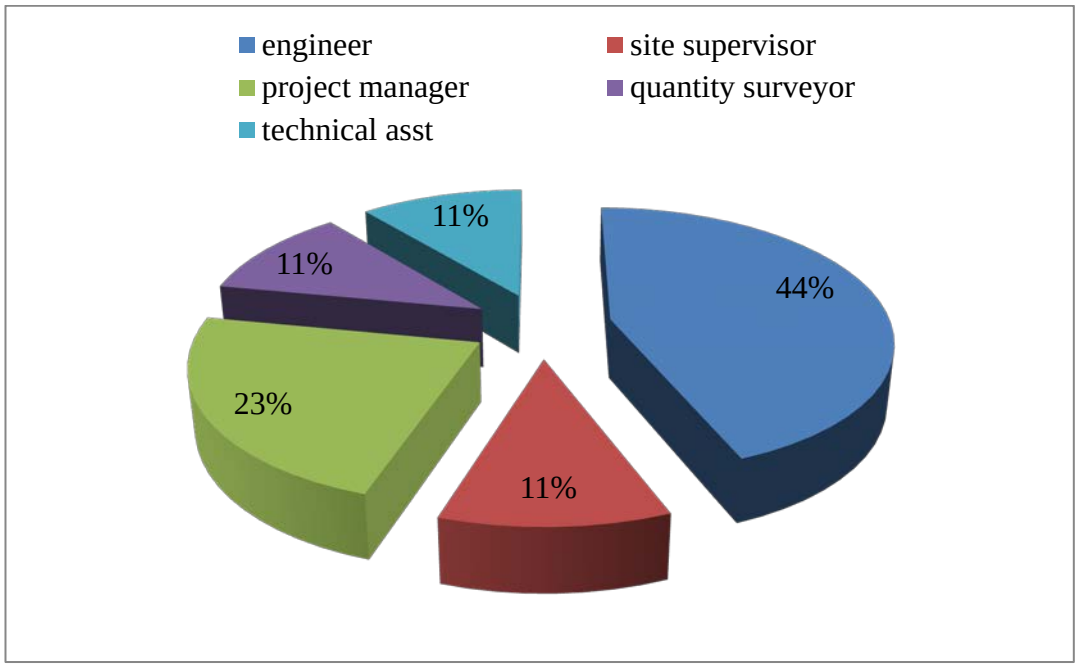

Figure 4.1: Position of the respondent

From the questionnaire, many of the respondent are engineer, then follow by the project manager and only several percent of the respondent are site supervisor, quantity surveyor, and technical assistant.

4.3.2 Type of company or organization

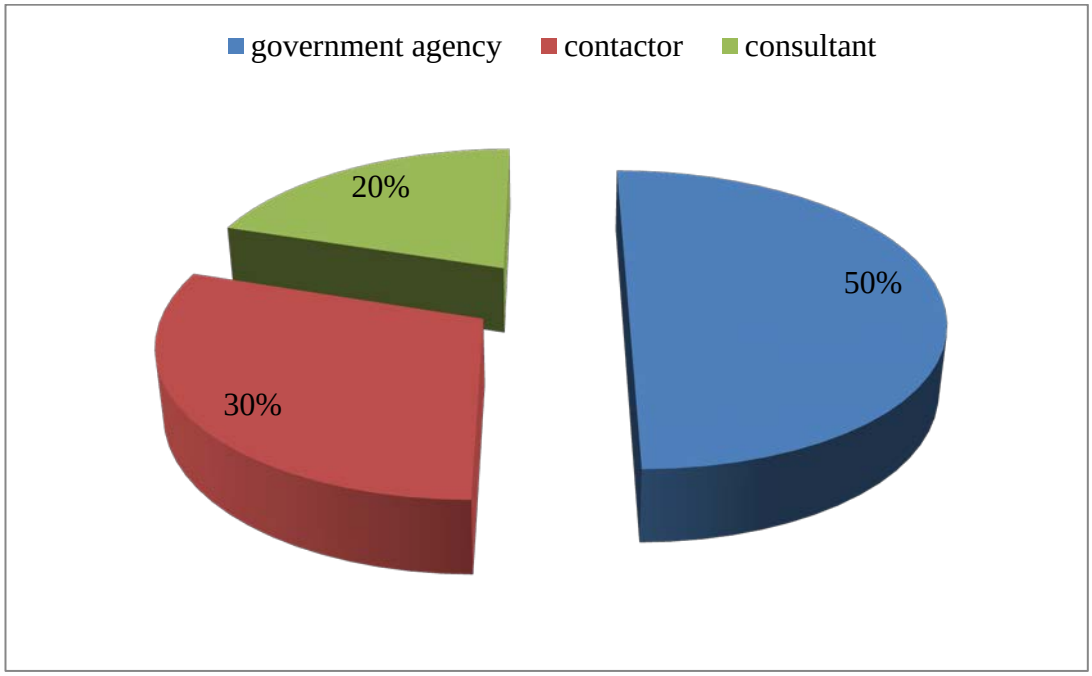

Figure 4.2 : Type of organization

From the questionnaire, half of the respondent work for government agency, other than that works for contractor and consultant.

4.3.3 Duration has served the company

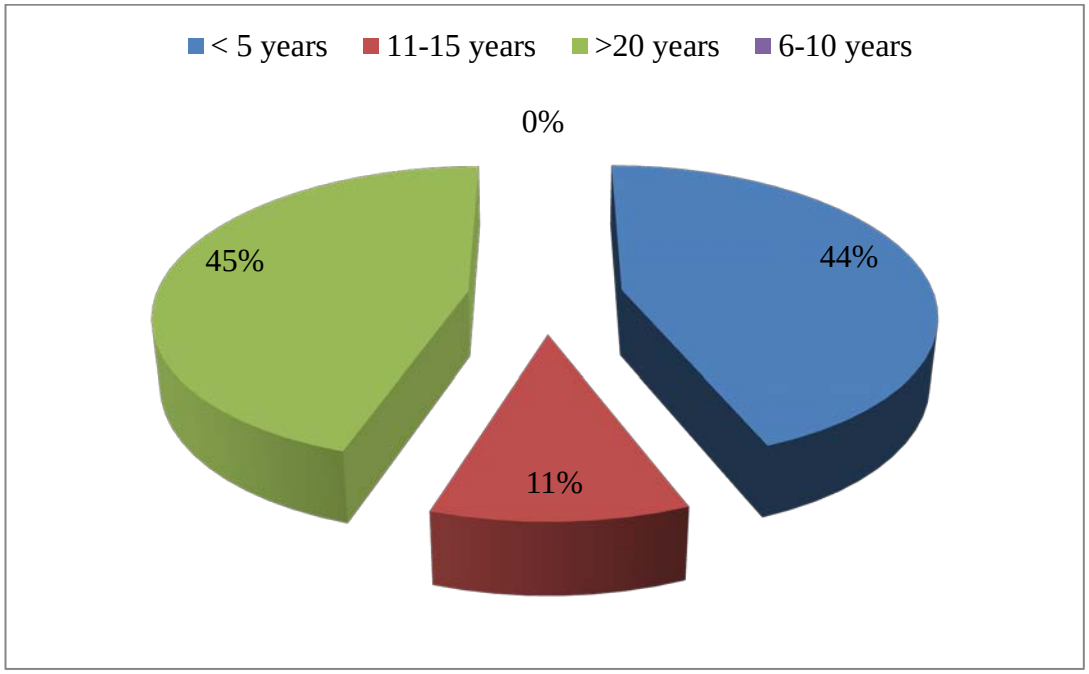

Figure 4.3: Duration served the company

From figure 4.3, it shows that 45% of the respondent has been worked for more than 20 years, 44% of the respondent has been worked less than 5 years, 11% has been worked for 11-15 years, and no respondent has been work for 6-10 years.

4.4 Analyses for section B

This part will focus on the basic knowledge of each respondent about the Social Impact Assessment.

4.4.1 Pharse of social impact assessment

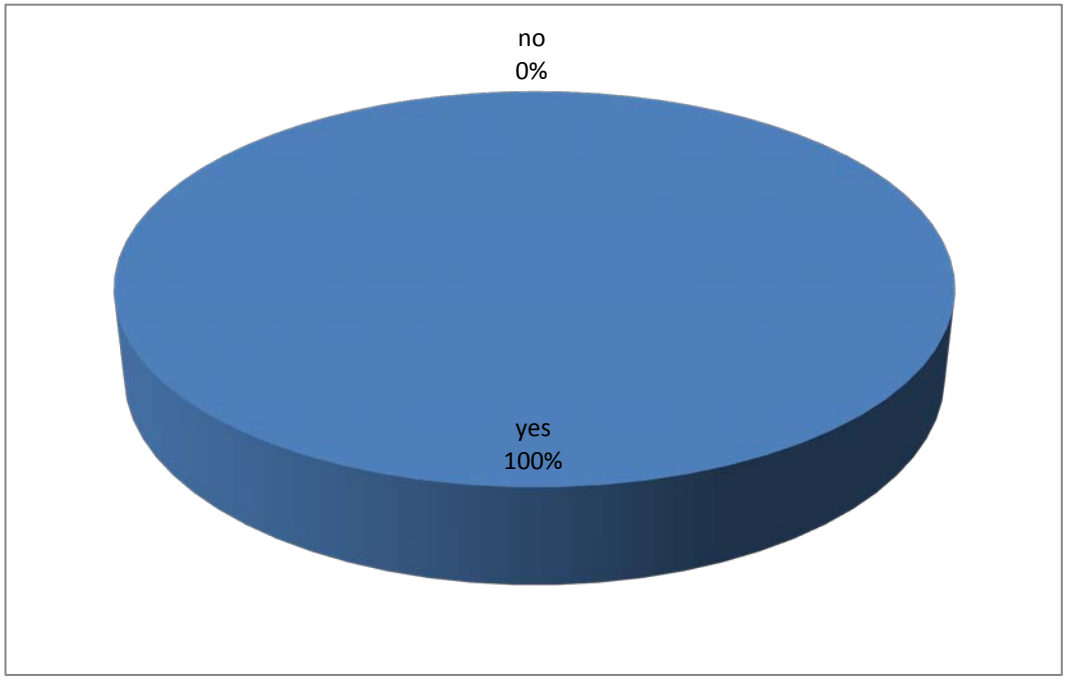

Figure 4.4: Knowing the Social Impact Assessment

From the figure 4.4 above, all of the respondents know about social impact assessment. There is no one from the respondent that does not know about the social impact assessment.

4.4.2 Source they know SIA

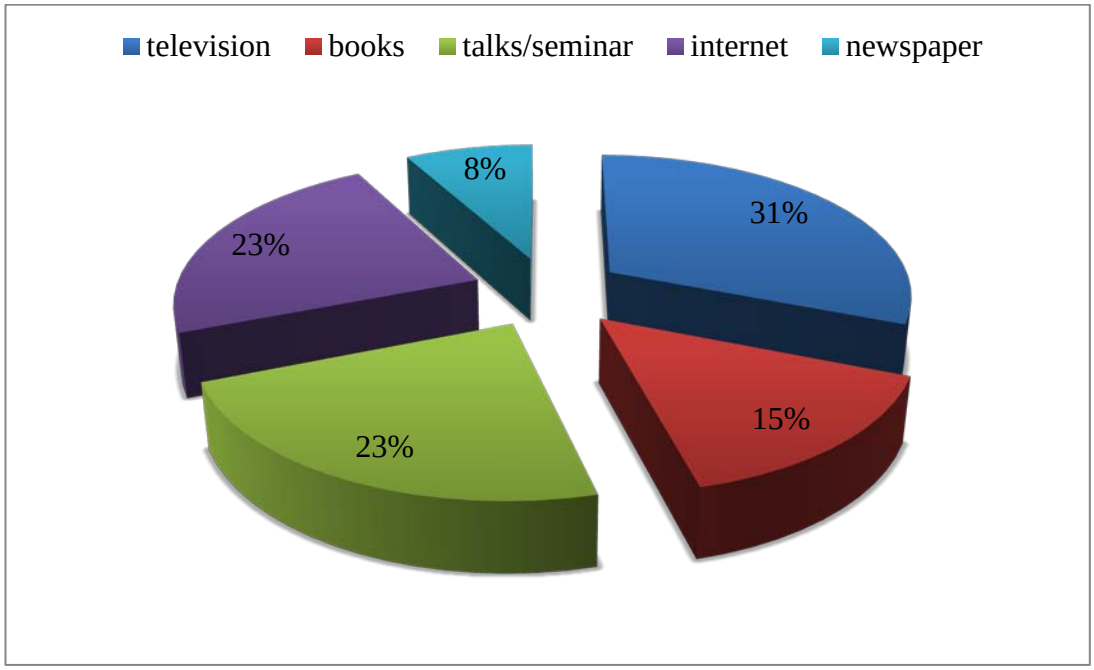

Figure 4.5: Source know Social Impact Assessment

In the figure 4.5, it shows that 31% of the respondent heard about social impact assessment by television. 23% heard by talks/seminars and from the internet. 15% from books and 8% by reading the newspapers.

4.4.3 Information on social impact assessment

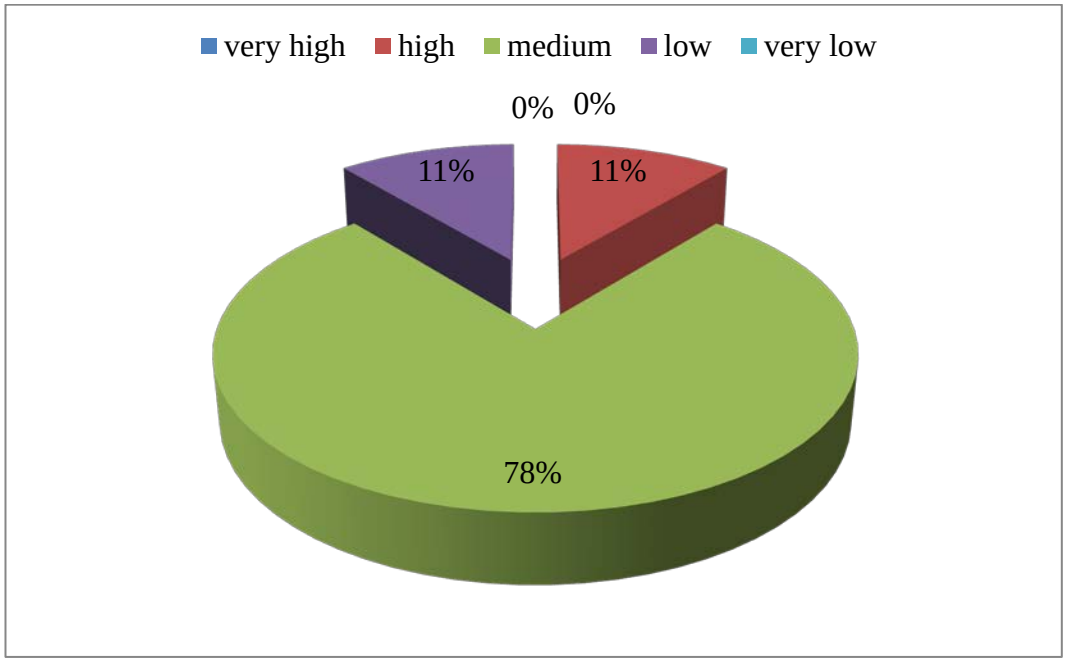

Figure 4.6: Information on Social Impact Assessment

From figure 4.6, 78% of the respondents have medium level of the information on social impact assessment. 11% high and 11% low. Many respondents have medium label of the information on social impact assessment because our country don't really focus on social impact assessment in construction or development.

4.4.4 SIA must be consider before develop an area.

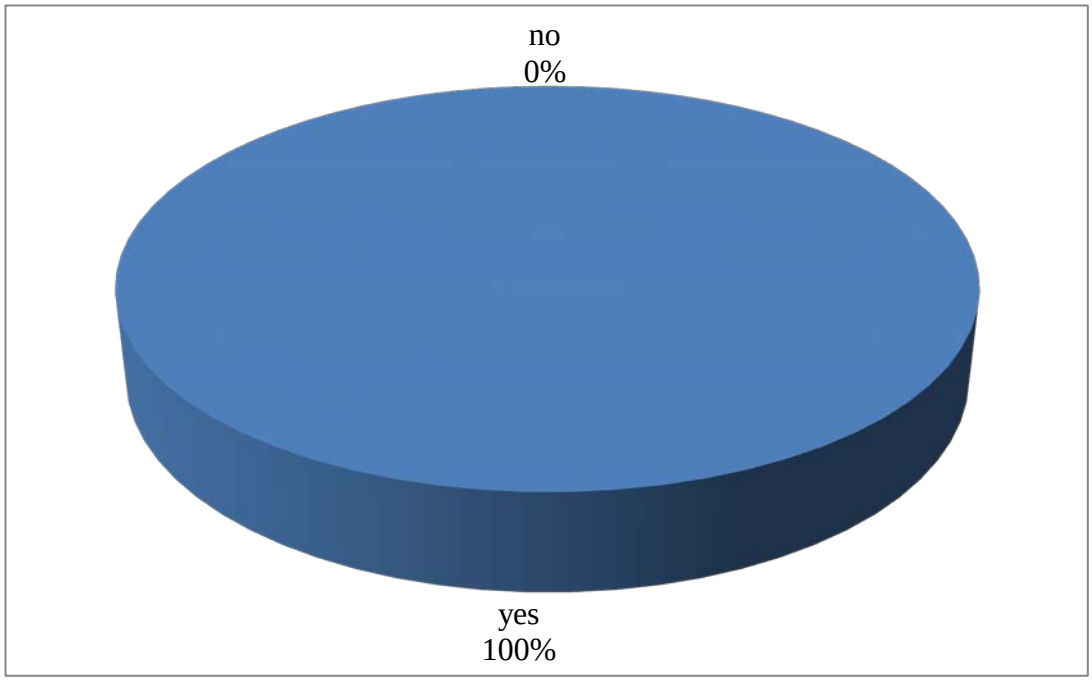

Figure 4.7: SIA must consider before develop an area

All of the respondent agree that SIA must be consider before develop an area. It is because there are many factor that we must consider before develop an area.

4.4.5 SIA has been used in the past

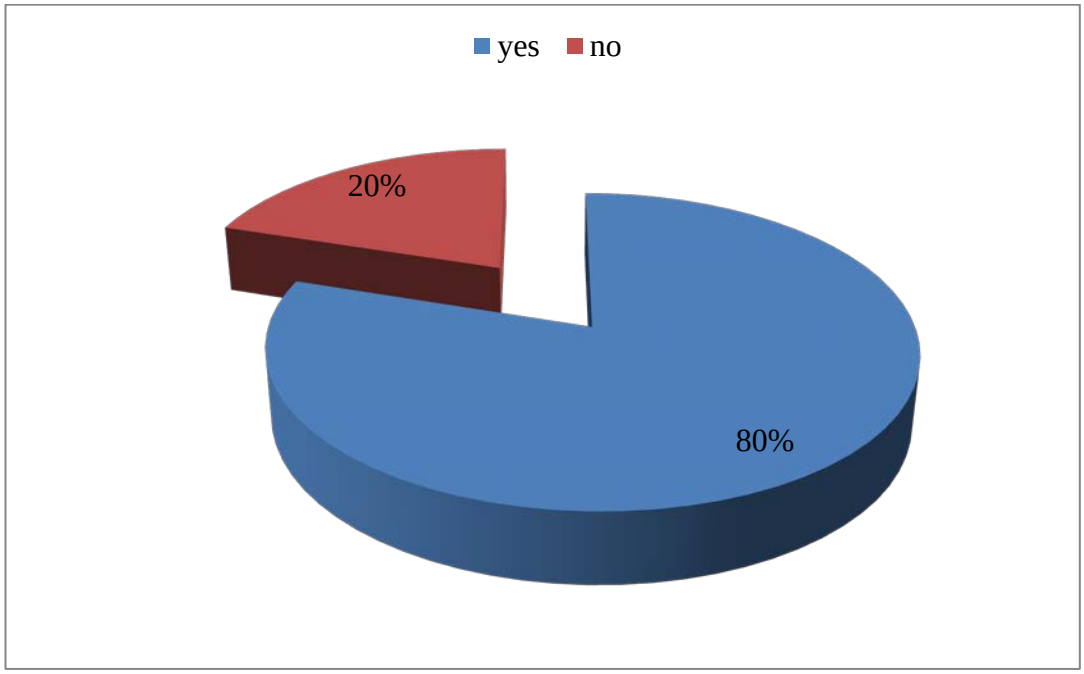

Figure 4.8: SIA used in the past

From figure 4.8 80% says that social impact assessment has been used in the past but 20% says that social impact assessment hasn't been used in the past.

4.4.6 SIA in urban development could be improved

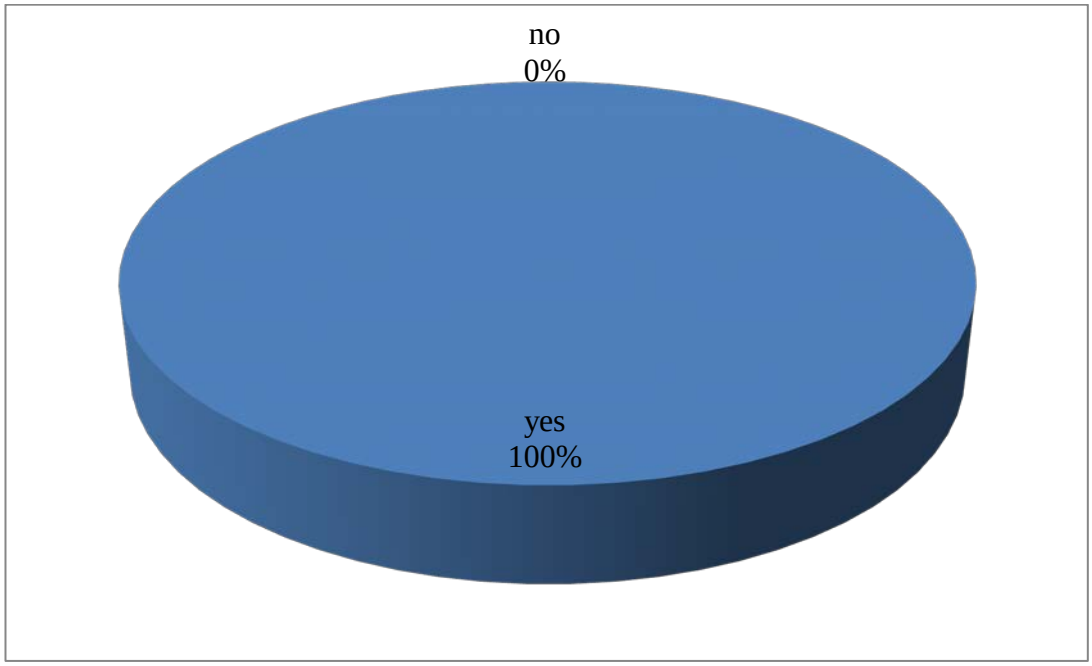

Figure 4.9: SIA could be improved

From the questionnaire, the respondents agree that social impact assessment in urban development could be improved.

4.5 Analysis section C

This section analyzed about the relationship of the social impact assessment in urban development.

Data for Social Impact Assessment have been analysed by using AI method. AI method is then classified into 5 catagories.

The average values have been used to quantity the frequency of each types of SIA. Each scale represents the following rating:

1. Strongly disagree $1.00 \leq \text{min index} < 1.50$
2. Disagree $1.50 \leq \text{min index} < 2.50$
3. Fair $2.50 \leq \text{min index} < 3.50$
4. Agree $3.50 \leq \text{min index} < 4.50$
5. Strongly agree $4.50 \leq \text{min index} < 5.00$

4.5.1 Development will increase population size

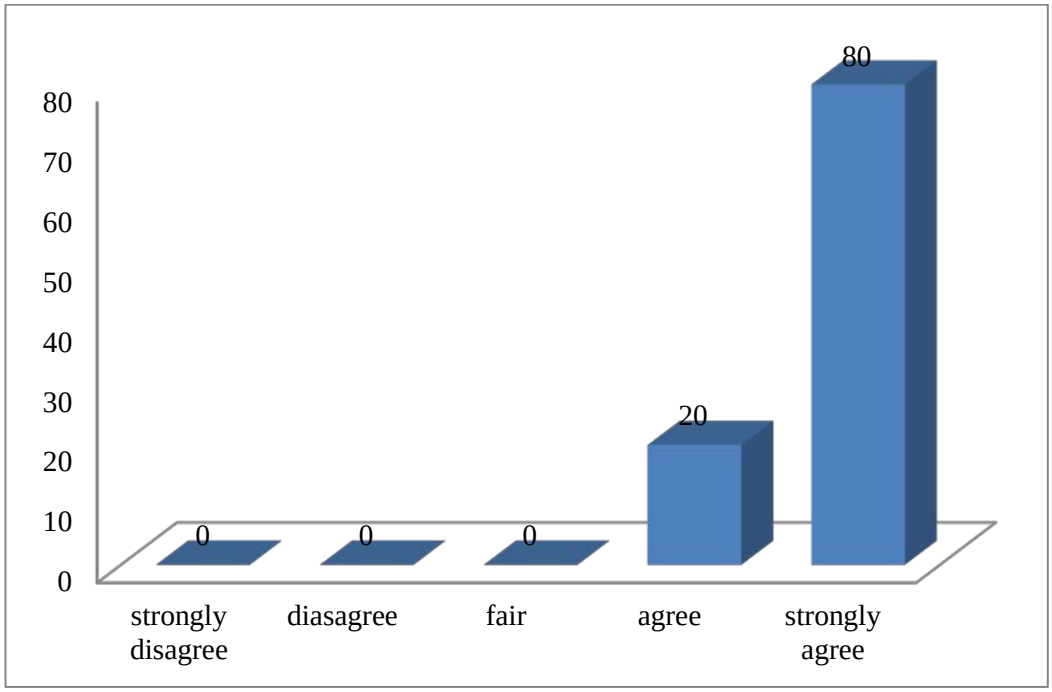

Figure 4.10: Development increase population size

From the figure 4.10 above, 20 % agree and 80% strongly agree that the development will increase in population size. It will increase the population size because many people will come to town to work, and some of them were migrate to town. When economy activities increase, the population will increase. When population increases, social impact will increase.

4.5.2 Development will increase the economy.

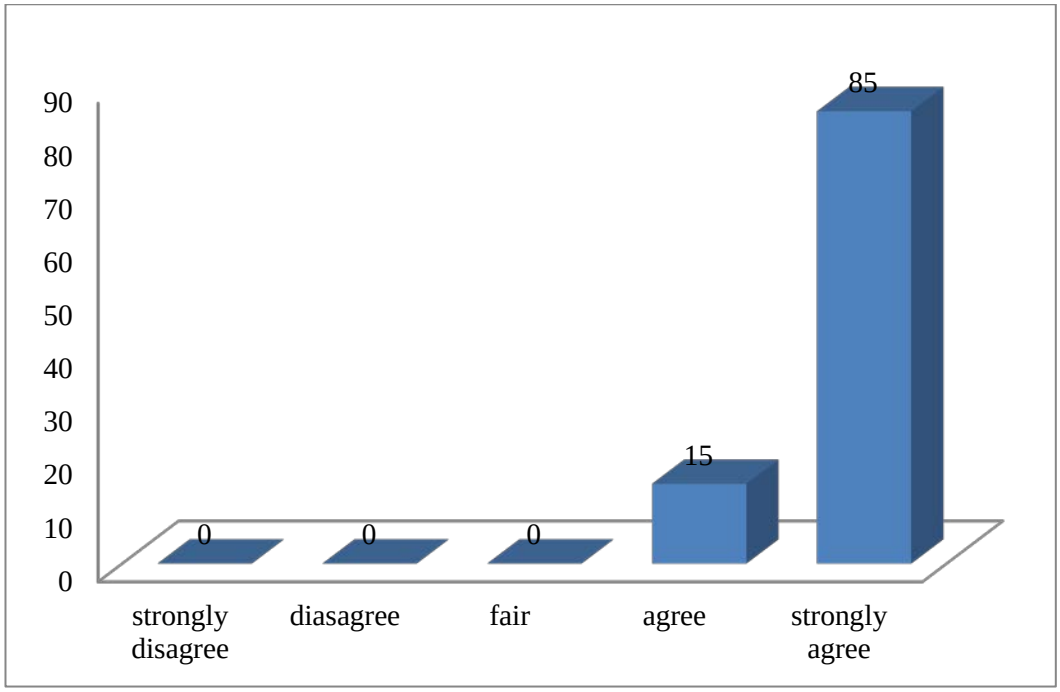

Figure 4.11: Development increase economy

From the figure 4.11, most of the respondents agree that development will increase the economy. If the place becomes bigger, there are more opportunities to expend business and other things. That is why development will increase economy.

4.5.3 Development will increase the transportation and rural accessibility

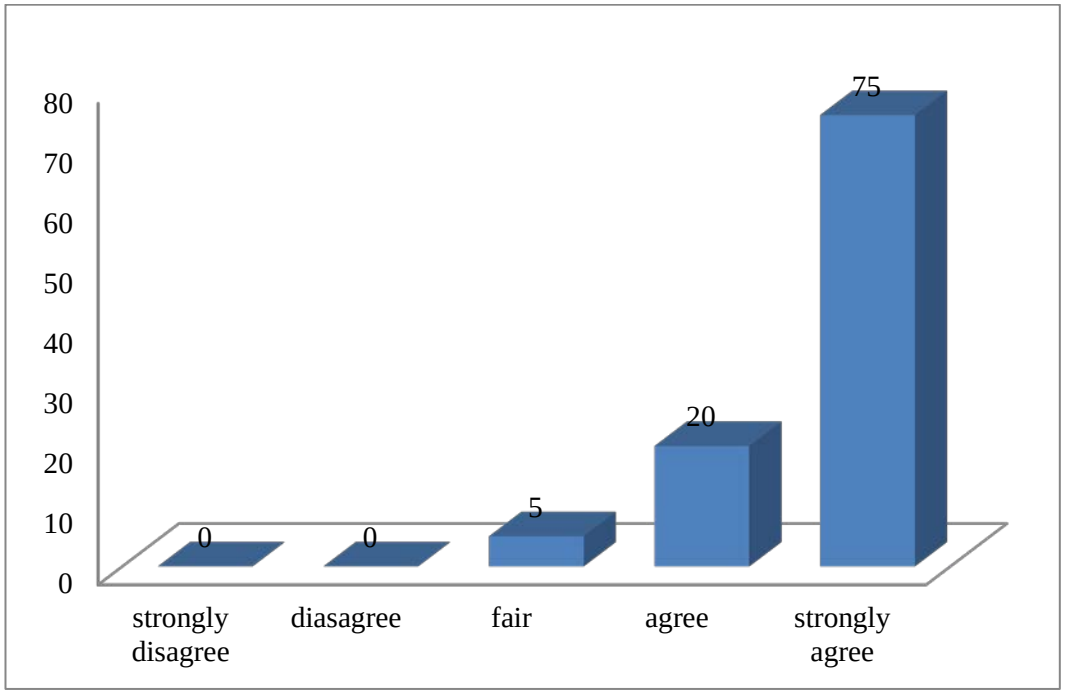

Figure 4.12: Development increase transportation and rural accessibility

Many of the respondents strongly agree that development will increase the transportation and rural accessibility.

4.5.4 Development will lead to an increase or decrease in employment opportunities.

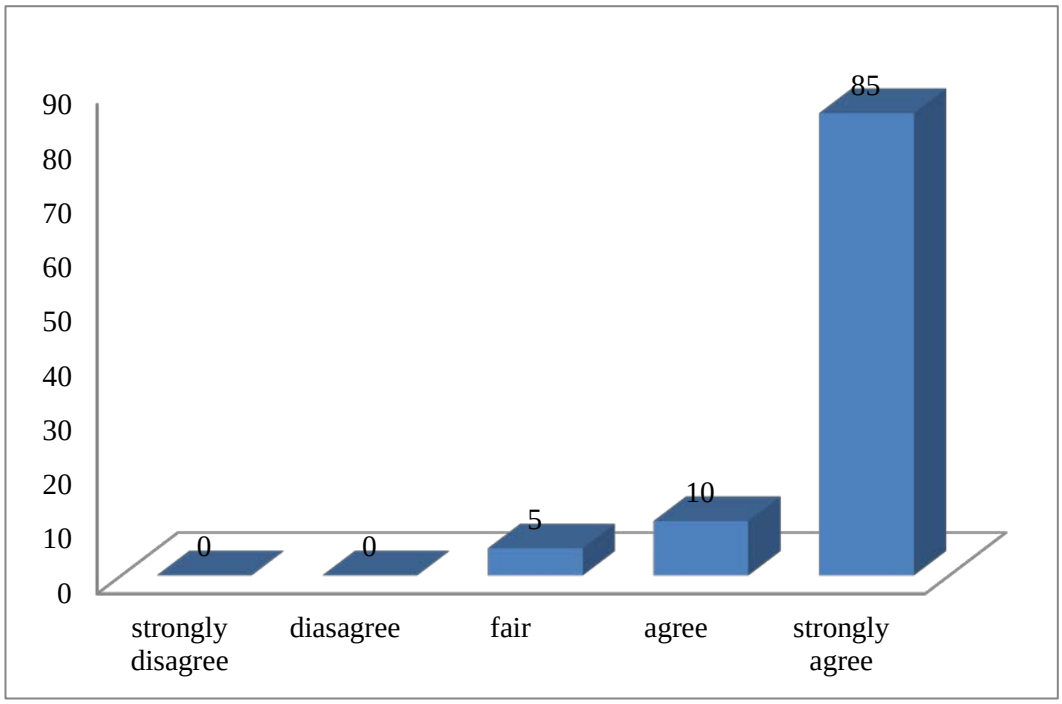

Figure 4.13: Development increase and decrease employment opportunities

From the figure 4.13, 75% strongly agree that development will lead to an increase or decrease in employment opportunities. 20% agree and 5% fair. When there is development in some places, many constructions begin so it will lead to this situation.

4.5.5 Development will lead to rural to urban migration

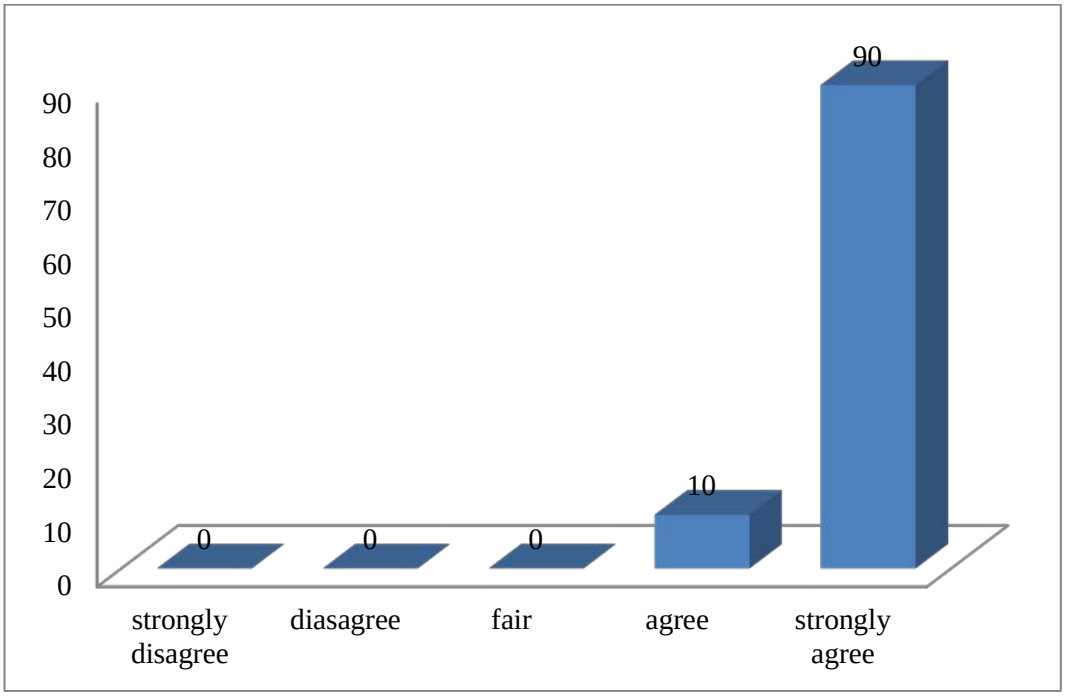

Figure 4.14: Development lead to rural to urban migration

According to the figure 4.14 above, 90% strongly agree that development will lead to rural to urban migration. It is because it is happening in our country. Many villages went to town to work and migrate because of the demand.

4.5.6 Development affect communities social history.

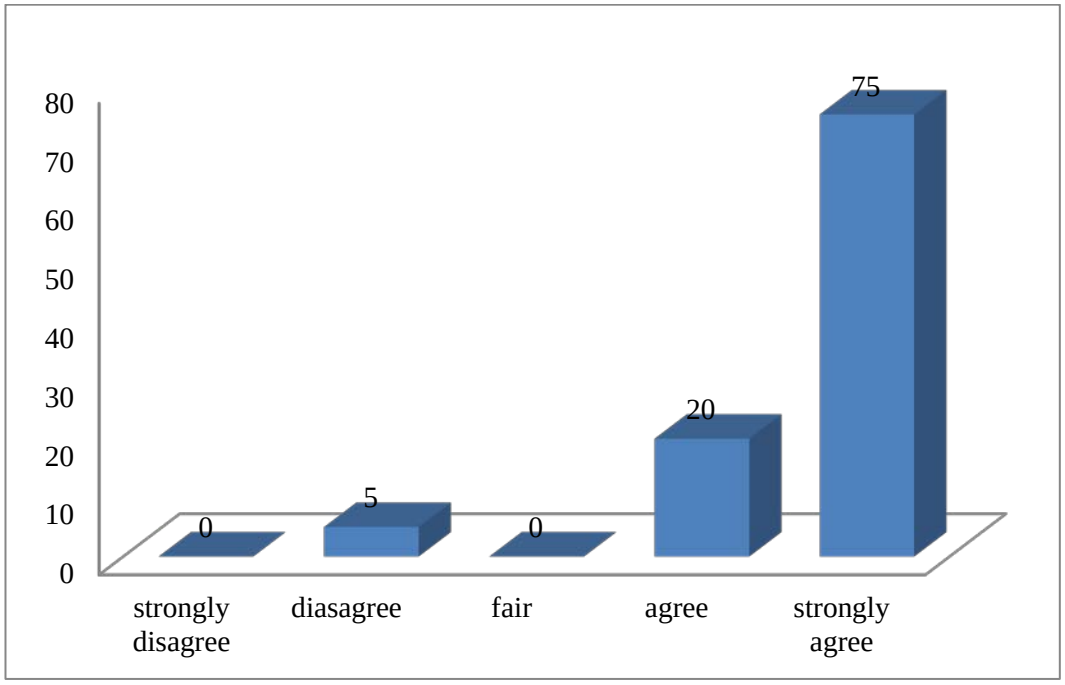

Figure 4.15: Development affects community's social history

From the figure 4.15 above, 5% disagree that development affect community's social history. 20% agree and 75% strongly agree that development affect communities' social history.

4.5.7 Development will impact on people's sense of place.

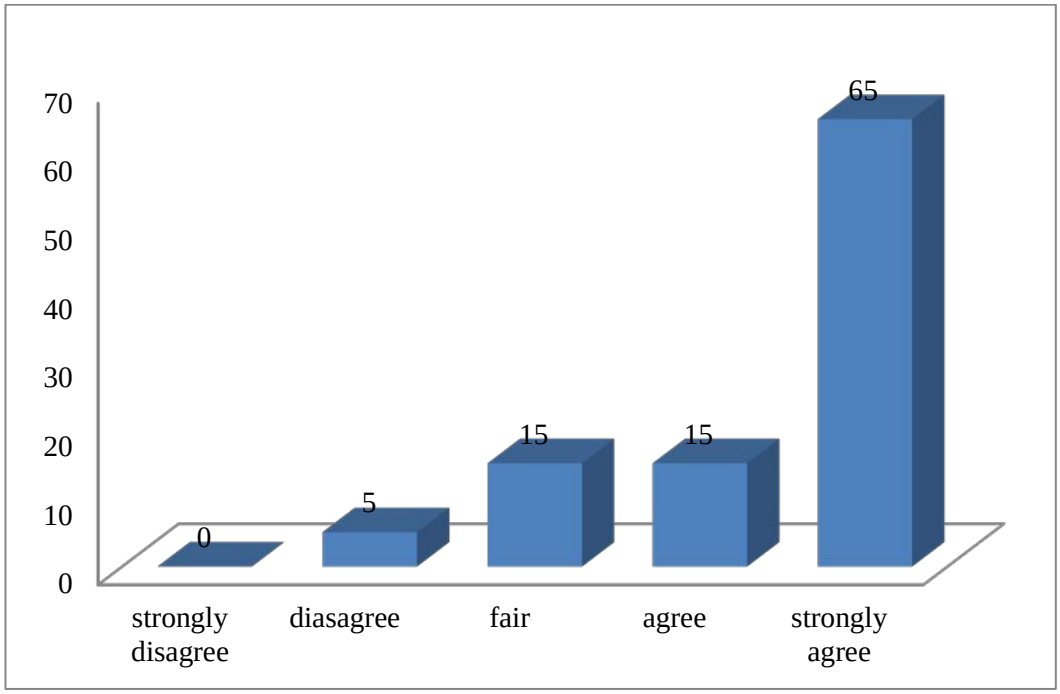

Figure 4.16: Development impact on people's sense of place

According to the figure above, 65 % and 15% strongly agree and agree that development will impact on people sense of place. 15% think fair and 5 % disagree.

4.5.8 Development will change aspect of the community infrastructure

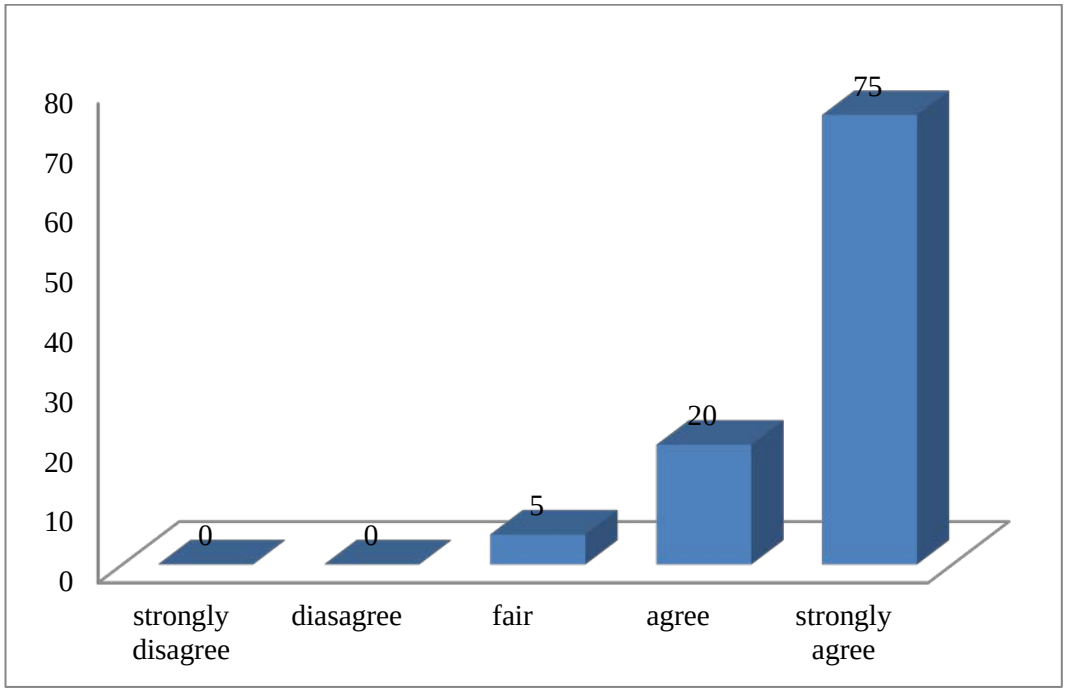

Figure 4.17: Development change aspect of the community infrastructure

From the figure 4.17, 65% strongly agree, 30% agree and 5% fair. Of course that development will change aspect of the community. For example, school will be bigger to support the increasing student every year because of the development.

4.5.9 Development will impact on people's access to environment

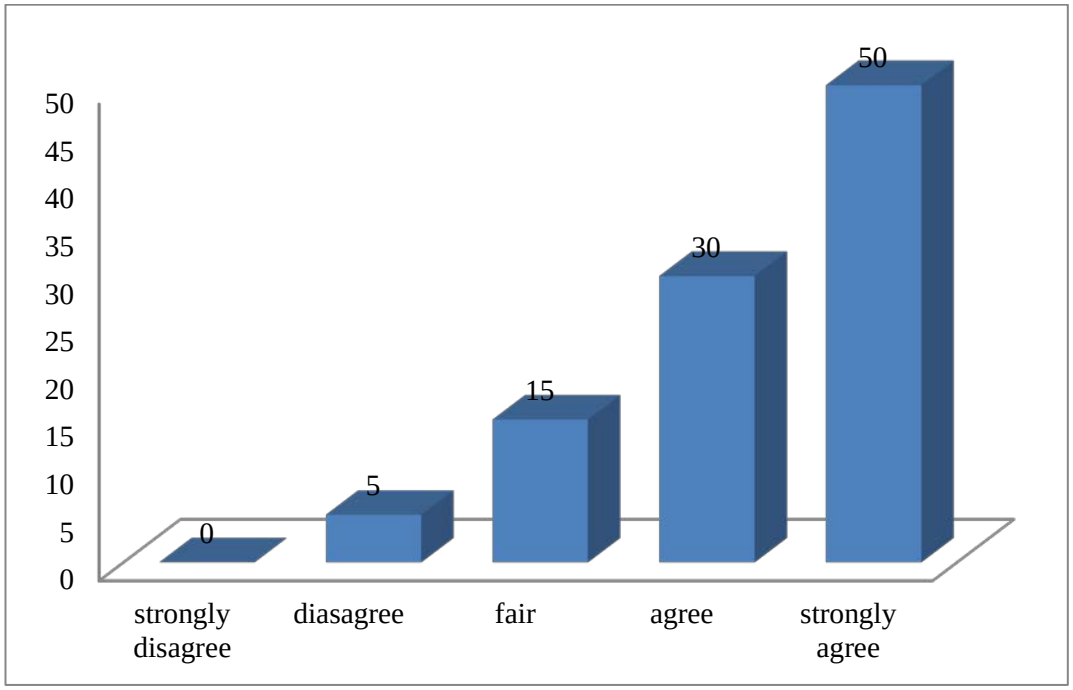

Figure 4.18: Development impact on people's access to environment

According to the figure 4.18, 50% strongly agree, 30% agree, 15% think it is fair, and 5 % disagree that development will impact on people's access to the environment.

4.5.10 Development will change the income generating focus of the community

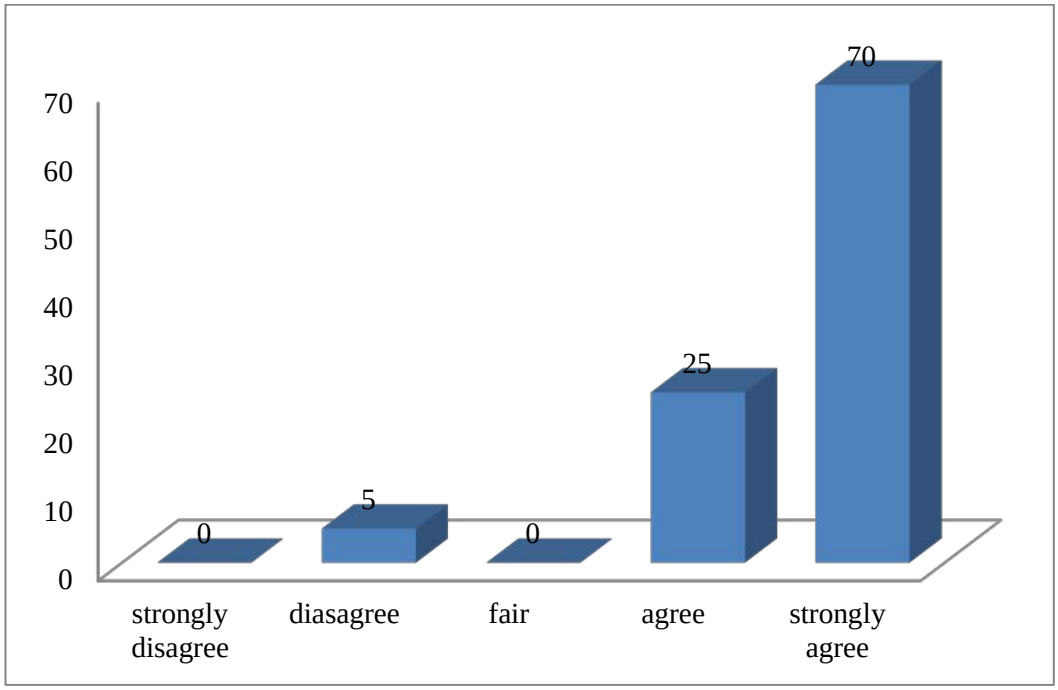

Figure 4.19: Development change income generating focus on the community

70% strongly agree, 25% agree and 5% disagree that development will change the income generating focus of the community. It is based on the figure 4.19 above.

4.6 Average index of Social Impact Assssment in Urban Development

Table 4.2: Average index of social impact assessment

	1	2	3	4	5	average index	rank
The development will increase in population size	0.00	0.00	0.00	4.00	16.00	4.80	3
The development will increase the economic activity	0.00	0.00	0.00	3.00	17.00	4.85	2
The development increased the transportation and rural accessibility	0.00	0.00	1.00	4.00	15.00	4.70	6
The development will lead to an increase or decrease in employment opportunities.	0.00	0.00	1.00	2.00	17.00	4.80	4
The development will lead to rural to urban migration	0.00	0.00	0.00	2.00	18.00	4.90	1
The development affect communities social history	0.00	1.00	0.00	4.00	15.00	4.65	7
The development will impact on people's sense of place	0.00	1.00	3.00	3.00	13.00	4.40	9
The development will change any aspect of community infrastructures	0.00	0.00	1.00	4.00	15.00	4.70	5
The development will impact on people's access to environmental resources that help sustain the livelihood	0.00	1.00	3.00	6.00	10.00	4.25	10
The development will change the income generating focus of the community	0.00	1.00	0.00	5.00	14.00	4.60	8

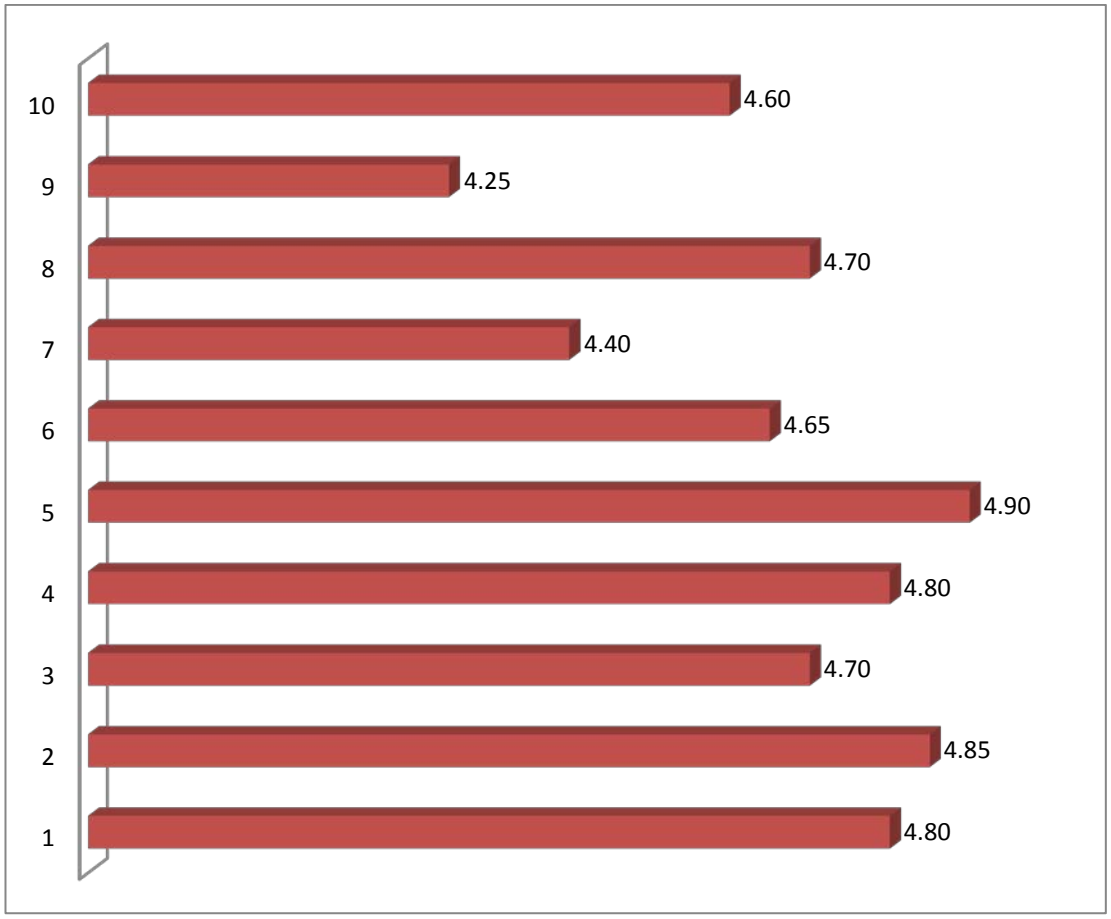

Figure 4.20: Average index of social impact assessment in urban development.

Figure 4.20 show the average index of social impact assessment in urban development the first ranking in the index is 4.90 which is the development will lead to rural to urban migration and the last ranking is 4.25 which is development will impact on people's access to environmental resources that help sustain the livelihood.

CHAPTER 5

CONCLUSION AND RECOMENDATION

5.1 Introduction

This chapter consists of two sub-parts that are conclusion and recommendation of the study. Conclusion is important as it determines the understanding of researcher to the subject matter being studied.

While conclusion summarized all the findings and revealed the success or failure in achieving of the objectives within the scope of the study, recommendation identified problem and shortfall and proposed steps for improvement in future studies.

5.2 Conclusion

The three main objective of this project perceived aim of this research. Overall, there are three (3) objectives which have been achieved to conclude this study. There are:

i. To assess the way SIA has been used in the past.
ii. To consider how social impact assessment in urban development could be improved.
iii. To highlight best practice recommendations and general principals of social impact assessment those are relevant for urban development.

5.2.1 To assess the way SIA has been used in the past

Based on analysis from the questionnaire given, most of the respondents know what Social Impact Assessment is and most of them think that social impact assessment has been used in the past. It is because; the urban development improves the position of the worst-off members of society and resettle people are better off after relocation.

5.2.2 To consider how social impact assessment in urban development could be improved.

From the questionnaire given, all of the respondents agree that social impact assessment in urban development could be improved. It is because the need of social impact assessment is greater and the increased demand for SIA. There are new approaches emerging, which SIA has to compete with, and integrate. These approaches include social risk assessment, sustainability assessment and corporate social responsibility. There is a concern, not with the prevention of negative impacts, but on building social capital, on capacity building, good governance, community engagement and social inclusion.

5.2.3 To highlight best practice recommendations and general principals of social impact assessment those are relevant for urban development.

From the overall questionnaire that distributed and had been analyze, there are recommendations and general principal of social impact assessment those are relevant for urban development that can be suggested such as:

i. **Principles that relate to the consideration of ALL social impacts**

- Appreciate the existence of spiritual worldviews and the potential existence of sacred places.
- Consider the quality of life (social wellbeing) of the people and not their standard of living.

- Consider impact equity- the differential distribution of impacts. Make sure that the same people do not experience all of the impacts.

ii. Principles relating to the integration of social and biophysical environment

- Appreciate that all impacts are social impacts and that people experience the physical environment in human terms.
- Always extrapolate from changes in the biophysical environment to their human implications.
- Appreciate seasonality and the implication of this for people and their activities.

iii. Impact management and minimization principles

- Promote active impact management and the ability of SIA to assist in mitigation.
- Avoid relocation/resettlement if at all possible.
- Provide training programs to allow locals to take on jobs rather than importing outsiders.

iv. Community development principles

- Consider the needs of vulnerable, at risk, groups and/or ethnic minorities and/ or indigenous peoples.
- Focus on proverty reduction and always seek to improve the position of the worst off members in society.
- Recognize and preserve the existence of social diversity.
- Maintain community integrity and viability.

v. Data integrity principles

- Consider/validated the legitimacy of official data by cross checking whit community and/or NGO and/ or local authorities.
- Consider the role of local knowledge in the project;
- Respect the intellectual property rights of local people.

5.3 Recommendation

5.3.1 Recommendation for this study

From the analysis and personal side of view, there several recommendations to manage the effects of natural hazard to sustainable urban development which are:

a) There should be the proper documentation on urban development records by all parties involved in construction industry. A system database can provide the faster and easier access to information rather searching manual documentation.

b) Personnel especially future engineer should undergo more training and research to gain more exposure on current technologies and methods or approaches on social impact assessment.

c) More general principal and recommendations should be highlight so that social impact assessment in urban development could be improved to prevent the negative impacts.

5.2.3 Recommendation for the Future Studies

From the overall of the findings of this study, it shows that this study has a limitation of the findings and cannot be yet established for the actual application due limited numbers of respondents during the conducted validation survey. There are overall seven categories focused by this study. Due to numerous numbers of categories, this study is unable to focusing on the specific category for its findings. Therefore, for future research, it is recommended that the researchers should narrow the topic to specific category or sub-categories under this study. By narrowing the topic, better results will be produce through its findings and researchers can put more focus to one topic only. Furthermore, future research should enriches the participant of respondent when conducting a validation survey or delivering a questionnaires.

Moreover, all the respondents should cover from various states in Malaysia. This can enriches the discussion of the findings where the researchers may found different point of views according to each stat's representatives. Furthermore, through out the valuation of this study, it is recommended that future researcher may extend this research for detailed study on social impact assessment in urban development.

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APPENDIX

BACHELOR OF CIVIL ENGINEERING

FACULTY OF CIVIL ENGINEERING & EARTH RECOURCES

UNIVERSITI MALAYSIA PAHANG

QUESTIONNAIRE FORM FOR FINAL YEAR PROJECT

RESEARCH TITLE:

SOCIAL IMPACT ASSESSMENT IN URBAN DEVELOPMENT

- The purpose of this questionnaire is to gather information to fulfill the requirement for the best Bachelor Degree of Engineering in Civil.
- All the information will remain as confidential information and will use as academic purpose only.
- Thank you for all your cooperation for answering the questionnaire

Student name:

NUR SYAFAWATY BINTI ABD RAHMAN
870501-01-5788
014-8249679

Supervisor:

MOHAMMAD SYAMSYUL HAIRI B SAAD
FACULTY OF CIVIL ENGINEERING

SOSIAL IMPACT ASSESSMENT

INTRODUCTION

Social impact assessment is the process of analyzing (predicting, evaluating and relecting) and managing the intended and unintended consequences on the human environment of interventions (policies, plans, programs, projects and other social activities) and social change processes as to create a more sustainable biophysical and human environment.

SIA is also understood to be an umbrella or overaching framework that embodies all human impacts including aesthetic impacts, archeological impacts, community impacts, cultural impacts, demographic impacts, development impacts, economic and fiscal impacts, gender assessment, health impacts, indigenous rights, infrastructural impacts, intuitional impacts, political impacts, poverty assessment, psychological impacts, resource issues, tourism impacts, and other impacts on societies.

THE OBJECTIVES

The goals of the study are define and objective in order to achieve the goals. Several objectives have been identifying as follow:

- To assess the way SIA has been used in the past – specifically what is captured and what is missed and what were the principles, procedures and methods of SIA.
- To consider how social impact assessment in urban development could be improved
- To highlight best practice recommendations and general principals of social impact assessment that is relevant for urban development.

SECTION A : PERSONAL PARTICULAR

1. NAME : ……..

2. COMPANY/ORGANIZATION : ……..

3. DESIGNATION : ……..

4. TYPE OF COMPANY/ ORGANIZATION

   [ ] Developer [ ] Consultant Firm

   [ ] Contractor [ ] Others: …….

   [ ] Architectural Firm

5. DURATION OF THE COMPANY/ORGANIZATION HAD SERVED:

   [ ] < 5 years [ ] 11-15 years

   [ ] 6-10 years [ ] > 20 years

6. CURRENT PROJECT : …….

7. COMPANY/ORGANIZATION STAMP:

SECTION B: LEVEL OF KNOWLEDGE OF SOCIAL IMPACT ASSESSMENT

1. Do you know what Social Impact Assessment is?

   [ ] Yes [ ] No

2. From what source you know it?

   [ ] Television [ ] Internet

   [ ] Books [ ] Newspaper

   [ ] Talks/Seminar [ ] Others: ……

3. How well your information on Social Impact Assessment?

   [ ] Very high [ ] High

   [ ] Medium [ ] Low

   [ ] Very Low

4. Do you agree that Social Impact Assessment must be consider before develop an area?

   [ ] Yes [ ] No

5. Do you think that Social Impact Assessment has been used in the past before develop an area?

   [ ] Yes [ ] No

6. Do you think Social Impact Assessment in urban development could be improved?

   [ ] Yes [ ] No

SECTION C: SOCIAL IMPACT ASSESSMENT IN URBAN DEVELOPMENT

For this question, you are required to choose either one from 1 to 5 whether you agree with the statement on Social Impact Assessment.

1. Strongly disagree
2. Disagree
3. Fair
4. Agree
5. Strongly agree

Do you think the urban development will give a social impact?

1	The development will increase in population size	1	2	3	4	5
2	The development will increase the economic activity	1	2	3	4	5
3	The development increased the transportation and rural accessibility	1	2	3	4	5
4	The development will lead to an increase or decrease in employment opportunities	1	2	3	4	5
5	The development will lead to rural to urban migration	1	2	3	4	5
6	The developments affect communities' social history	1	2	3	4	5
7	The development will impact on people's sense of place.	1	2	3	4	5
8	The development will change any aspect of community infrastructure, e.g. clinics, schools, churches, formal or informal sports fields, open areas, dumping grounds	1	2	3	4	5
9	The development will impact on people's access to environmental resources that help to sustain their livelihoods	1	2	3	4	5
	The development will change the income generating focus of the community	1	2	3	4	5