

**From river catchments areas to the sea:
comparative and integrated approach
to the ecology of Mediterranean coastal zones
for sustainable management
(MEDCORE)**

A Manual For Socioeconomic Study

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Forward

The project entitled “From river catchments areas to the sea: comparative and integrated approach to the ecology of Mediterranean coastal zones for sustainable management (MEDCORE)” is a project funded by the EC. It represents an attempt to enhance sustainability of the coastal areas of the Mediterranean. It involves a number of partners from north and south the Mediterranean including Egypt, Greece, Italy, Malta, Morocco, Portugal, Spain, and Tunisia.

The project involves assessment of the prevailing environmental and socioeconomic conditions in order to develop a sustainability strategy for the coastal areas of the Mediterranean. Accordingly, socioeconomic conditions represent an integrated part of such a study, which aim ultimately to attaining sustainable development. Accordingly, this manual was developed to coordinate and integrate the socioeconomic work to be conducted by various partners under the umbrella of this project.

It should be noted, however, that this manual is by no means represents a comprehensive collection of various aspects of the topic. Rather, this manual has been prepared as guidelines to be used by Medcore project partners in conducting socioeconomic studies in their study sites.

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1. Introduction:

Coastal areas, which represent an interface between land and sea, contribute largely to the economies and welfare of the communities which depend, directly or indirectly, on the exploitation of the natural resources of these ecosystems. This means that there are interrelationships between environmental and socioeconomic conditions prevailing in these areas. On one hand, socioeconomic conditions in coastal areas are usually affected by the natural environment with its various ecosystems which provide a continuous supply of goods including fish, oil, gas, minerals, salt, construction materials, and services including shoreline protection, sustaining bio-diversity, water quality maintenance, transportation, recreation and tourism. Socioeconomic structures in coastal area may affect, positively or negatively, the environment and its ecosystems by various human activities being conducted in these areas. This, in return, means that the stability of environment and the community welfare in coastal areas are highly associated.

However, current growth and consumption patterns as well as unplanned development activities are placing increasing pressure on coastal areas ecosystems, causing a wide range of problems. Globally, it was estimated that, about two-thirds of the world's population live in coastal areas, and within three decades, 75 per cent of the world population will reside in coastal areas. These problems range between environmental degradation, biodiversity loss and deforestation, leading ultimately to the breakdown of socioeconomic systems. Such a pressure on coastal areas poses increasing threats to coastal ecosystems as they exceed the carrying capacity of these areas and leads usually to degradation of their resources and environmental quality in general (UNEP)¹.

Nowadays, Coastal areas in Mediterranean are usually associated with mass tourism, large-scale construction and infrastructure provision, intensive land development, and extensive urbanization. In this respect it was

estimated that, some 40-50 per cent of the Mediterranean population is already concentrated in the coastal areas, and this percentage is expected to double by the year 2025 (UNEP, 2000)². Such conditions, particularly where they are not controlled, represent ever-increasing threats and consequently create concern for the integrity of the ecosystems.

This is especially true with tourism, which is one of the most common activities in coastal areas of the Mediterranean. In this context, it was argued that Many Mediterranean coastal areas have clearly exceeded their carrying capacity³ for tourism activities⁴. Thus, tourism activities can have major negative impacts on the environment as they create increasing pressure on water resources, nature, landscape, air quality, coastal areas, etc. Moreover, tourism activities could destroy the cultural, natural and landscape values that are fragile assets.

This accordingly, emphasizes the need for sustainable development⁵ of coastal areas. According to sustainable development, economic growth and environmental protection are viewed as mutually comparable activities and not conflicting ones. This in turn requires that various human activities must be integrated within a coherent setting of land-use planning policies, addressing problems of environmental carrying capacity. They also should be planned and developed within the limits of the local socioeconomic and natural carrying capacities.

² United Nations Environment Programme (UNEP), Conceptual Framework and Planning Guidelines for Integrated Coastal Area and River Basin Management. <http://www1.unep.org/depi/icarm/guidee.doc>

² United Nations Environment Programme (UNEP), Global Environment Outlook, 2000 <http://www.grida.no/geo2000/english/0057.htm>

³ Carrying capacity assumes that there are a finite number of people who can be supported by natural ecosystems without degrading the natural environment and socioeconomic and cultural systems.

⁴ Conclusions of the EEB International Conference on Strategic Challenges for Tourism and Sustainable Development in the XXI Century, Porto, 13-14 April 2000 http://www.mio-ecsde.org/Publications/SMed/Smed17/p17_09.htm

⁵ In its simplest form, sustainable development means that the needs of present generations were met without compromising the ability of future generations to meet their own needs (Selman, 1992).

2. Objective of the manual:

Basically, the underlying purpose of this manual is to provide conceptual and practical guidelines on how to conduct a reliable assessment of the socioeconomic conditions, in the various study sites within MEDCORE project, in consistent format. It should be noted that such consistent format is intended for conducting comparative analysis of various study sites and consequently establish a set of general guidelines for sustainable development in the coastal areas of the Mediterranean.

3. Socioeconomic assessment:

Socioeconomic environment refers to a wide range of interrelated and diverse aspects and variables relating to or involving a combination of social and economic factors. These aspects and variables could, in general, be categorized into several categories including, economic, demographic, public services, fiscal and social. The social aspects may, for instance, involve community life as well as social and cultural attitude and values. Community services may meanwhile be concerned with housing and requirements for public services such as water, sanitation, communications, police and fire protection facilities, solid waste disposal as well as health and educational services. Demographic aspects may include population growth structures, distribution and density. Similarly, economic factors may include general characteristics, structures and changes various economic activities and employment⁶.

A socioeconomic assessment is a way to learn about the social, cultural, economic and political conditions of stakeholders including individuals, groups, communities and organizations.

The socioeconomic study is intended to:

- Assess the prevailing socioeconomic conditions in the study site. This includes provision of a baseline study and characterizing the existing state of the study site. This will assist in identifying the main areas of concern.

⁶ Muddock, S.H., F. L. Leistritz and R. R. Hamm (1986).

- Analyze the impacts of the prevailing environmental conditions on the socioeconomic structure of the study sites.
- Develop a set of guidelines for establishing viable communities.

Accordingly, the following section will be concerned with listing all possible socioeconomic impacts and the indicators used to estimate their magnitude. This is followed by a general discussion of the methodology usually employed in conducting socioeconomic analysis. Based on this methodology, an operational work plan is provided for the actual implementation of such socioeconomic analysis.

3.1 Possible impacts:

Generally, it should be stated that socioeconomic conditions are usually hard to identify and assess, as they are related to the human beings and their characteristics, which usually differ widely within the same community and from one community to another. Furthermore, as socioeconomic assessment deals with dynamic variables, no comprehensive list of areas of concern could be developed to fit socioeconomic assessment in all cases. However, there is a number of broad sets of socioeconomic impacts could be developed including economic impacts, demography; employment, health, and community resources including political, social, economic and cultural conditions (See table 1).

Table 1: Indicators for socioeconomic impacts

Impact area	Indicators
Economic conditions	<ul style="list-style-type: none"> • Economic structure • Income levels • Job opportunities
Community structure, institution and infrastructure	<ul style="list-style-type: none"> • Health and social services in study area, including health, workforce, law enforcement, fire protection, water supply, wastewater treatment facilities, solidwaste collection and disposal, and utilities. • Transportation systems in study area, including highway, rail, air, and motorway • Tourism and recreational opportunities in the study site • Tax levels and patterns in the study area, including land, sales, and income taxes • Institutional structure • Community cohesion, including organized community groups • Social orders including community attitudes, lifestyle and history of the community • Distinct settlements of ethnic groups
Demographic conditions	<ul style="list-style-type: none"> • General trends in population size for study site • Migration trends in the study area • Population characteristics in the study area including distribution by age, gender, ethnic groups, educational level and family size • poverty and wealth distribution
Employment	<ul style="list-style-type: none"> • Employment composition • Unemployment rate • Availability of job opportunities and their nature

Table 1: Indicators for socioeconomic impacts (continued)

Gender	<ul style="list-style-type: none"> • Gender distribution • Employment structure • Role of women
Community resources	<ul style="list-style-type: none"> • Land use patterns and controls for study site • Land values in the study area • Housing characteristics in the study area, including types of housing and occupancy levels and age and condition of housing • Areas of unique significance

In general, socioeconomic assessment attempts to find answers for the following questions:

a. Economic Impacts:

- What are the main characteristics of the study site economic structure and its share in the national income?
- How does such an economic structure may affect and affected by the environmental quality of the study site?
- How will local business be affected by rapid growth resulting from the development of the study sites?

b. Community structure, institutions, and infrastructure

- How are the affected communities organized, both formally and informally?
- What are the employment and economic dimensions of each group?
- What are the existing economic, social, or cultural inequities among groups, if any, and what are their causes?
- What experience do various groups have with induced change?
- What changes in these variables may be caused by alternative scenarios for study site development?
- What factors influence the daily lives of potentially affected members of the community?
- How stable is the pattern of residence?

- Do people in different groups feel that they currently have a satisfying way of life?
- What attitudes do people have toward risk, health, safety, and toward alternative scenarios for study site development?
- How available are community services and infrastructure? And how will their provision and availability be affected?⁷

c. Demography

- What are the demographic characteristics of the community? And to what extent they are affected by the prevailing environmental conditions?
- What is the current structure and organization of the potentially affected population? Is it stable or changing?
- Are there ethnic, economic, or social group distinctions within this population?
- What are the patterns of poverty and wealth, and income distribution among the population?

d. Employment

- What is the existing employment composition?
- What is the magnitude and composition of the unemployed?
- What are the types and characteristics of primary and secondary job opportunities that are expected to be created?
- Are there seasonal changes, or other kinds of influx and outflow?

e. Gender⁸

- What is the existing gender distribution of the population?
- What is the existing gender structure of employment and unemployment?
- What are the social and economic roles played by women in the community?

⁷ http://hydra.gsa.gov/pbs/pt/call-in/factsheet/1098b/10_98b_7.htm

⁸ The term gender does not refer here to simple population percentages, rather it is concerned with social facets of culture, religion and class, which determines the roles and status of males and females in society. Barrow, C.J., Environmental and social impact assessment: An introduction, Arnold, London, 1997

- What is the role of women, if any, in the existing decision making system?
- How are power and authority distributed in the community, both formally and informally?
- Who are the relevant stakeholders? What are their interests?
- How do they organize and exercise power within the community and at the regional and national levels?

f. Community resources

- How do people use the land, whether urban or rural? Are there conflicts between these different land uses?
- How do they use the natural environment?
- Are there culturally valued neighborhoods, shopping areas, recreational areas, or gathering places?
- Are there culturally valued patterns of social formal and/or informal groups?
- Are there valued historic places, archeological sites, or historical artifacts?

4. Methodology:

For a socioeconomic study to be organized and conducted properly, it should be systematic, and have minimum bias, and allow for consistent comparison and reasoned judgment. For all this to be accomplished, carefully planned, very precise and logical work methodologies are usually developed. Accordingly, a methodology was developed for the socioeconomic study of various study sites within MEDCORE project. This methodology consists of three main sections (Figure 1).

The first section aims to provide a comprehensive profile for the study site and develop criteria for socioeconomic assessment. This could be attained through develop a thorough background about both coastal areas considerations and socioeconomic assessment.

The second section deals with conducting the socioeconomic assessment, which begins with the identification of main issues in the study site and followed by identification by of main positive and negative socioeconomic aspects.

Criteria for socioeconomic assessment should be firstly developed. The development of such criteria should be based on the list of socioeconomic impacts and indicators discussed in section (3) of the manual. However, the specific features of each study site should be carefully taken into account in listing all possible impacts areas.

The socioeconomic assessment should identify all possible impacts. In order to take account of all possible impacts, there is a number of Impact identification approaches (methods) including:

- Checklists.
- Matrices
- Networks
- Overlays and geographical information systems (GIS)

Each of the above-mentioned method has its own advantage and disadvantage. However, the suitable method should be carefully selected. The choice of impact identification methods depends upon the type of impacts being considered, the nature of the likely impacts and the experience of the staff⁹

As the number of potential impacts in a study site is usually large, socioeconomic impacts should be scoped to focus on the most important impacts, both direct, and indirect. Scoping is carried out by identifying and assigning priority to socioeconomic impacts that might be examined within the context of the socioeconomic assessment¹⁰.

Scoping must be carried out in consultation with the affected groups and through the public participation process, should be based on:

⁹ For more details http://www.unep.ch/etu/publications/EIA_ovrhds/top06.pdf

- Probability that an event will occur
- Number of people potentially affected
- Duration of potential impacts
- Values of benefits and costs to affected groups
- Potential for reversibility or mitigation
- Likelihood of subsequent impacts
- Relevance to decisions
- Uncertainties over probable effects
- Controversy

The final and third section of socioeconomic study is intended to provide guidelines for sustainable development of the study sites.

It should be borne in mind that the implementation of the socioeconomic study involves a number of field work activities, which include field surveys to acquire data and information from primary sources. This data and information is mainly concerned with personal opinions, which cannot be obtained from secondary sources such as perceptions and opinions of the individuals about their concerns and future perspectives of the study site. They will also be utilized in the verification of data and information obtained from secondary sources.

Depending upon the objective of the field survey, the techniques of data collection should be determined. Generally, there is a wide range of techniques for data and information collection from primary sources including personal interview, telephone interview and mailed questionnaire. This means that the procedures and output of these techniques should be reliable and well-adopted to the case in hand.

Considerable amount of fieldwork with different population groups would require careful consideration of the right approaches; which include for

¹⁰ http://www.ucalgary.ca/UofC/faculties/EV/courses/EVDS649/winter_2003/EIA-Scoping.ppt

example, social surveys, questionnaires, interviews, use of available statistics, the Delphi technique. This would require recognition and understanding of the relationships of peoples' perceptions, their realities and the structures within which they exist¹¹. The ultimate objective is not only to obtain the required data and information but also to get them involved in the assessment process. This means that the objectives of the field survey should be clearly identified, which is the first step of conducting a successful field survey.

Concerning the questionnaire forms to be employed in such field surveys, they should be developed carefully taking into account a number of considerations These considerations include:

- The questions should be easily understood by the all individuals of the sample whatever their educational and cultural levels.
- The questions should be formulated to be accurately and clearly answered. This can be done through minimizing the open answer questions.
- The questions should be ordered so that the difficult and sensitive questions come later.
- The sensitive questions should be asked indirectly and their answers should be verified.

In order to ensure that the questionnaire is properly designed a pilot survey will be conducted with a feedback on the quality of questions, hard to understand ones. The pilot survey will include a number of questions, at the end of the primarily questionnaire to assess the reaction of those interviewed. The outcome of this pilot survey will assist to review the questionnaire, and make adjustments, where needed. At this stage, the final questionnaire form will be ready and can be used to collect data and information.

The form of survey to be conducted will depend upon direct interviews with the people in order to ensure high rate of response. It also helps to ensure the seriousness of the answers given by the interviewees. Moreover,

¹¹ Barrow, C.J., Environmental and social impact assessment: An introduction, Arnold, London, 1997

the sensitivity of some questions and the need for clear, sharp and explicit answers to some questions compel the need for personal interview approach.

Also, As a result of impossibility of investigating all population, sampling method will be useful to acquire data and information to save time, effort and fund. To ensure the representative of the sample, the sampling should be random strato. This will ensure that different socioeconomic groups are included in the sample.

The best representativeness of the sample for the population can be considered as a function of sample size and sampling method. This means that the pre-determination of the sample size is meaningless. So the decision of the sample size should e taken during the carrying out of the survey, taking into account time, effort and fund limitations

It should be noted that the involvement of communities' leader is of great importance to ensure the contacts with the target sample.

Since the most socioeconomic aspects of the environment, and their magnitudes, exist largely in people's minds, interaction with affected communities and groups is essential. There are many methods of interacting with people and groups to learn about their society. A systematic interview program, working with group leaders and participant observation (in which the analyst lives as part of the community while studying how it works) are among the methods that can be employed¹². Still, the choice of methods will necessarily reflect not only available time and funds, but also reflect the kind of community affected¹³.

¹² http://hydra.gsa.gov/pbs/pt/call-in/factsheet/1098b/10_98b_7.htm

¹³ http://hydra.gsa.gov/pbs/pt/call-in/factsheet/1098b/10_98b_7.htm

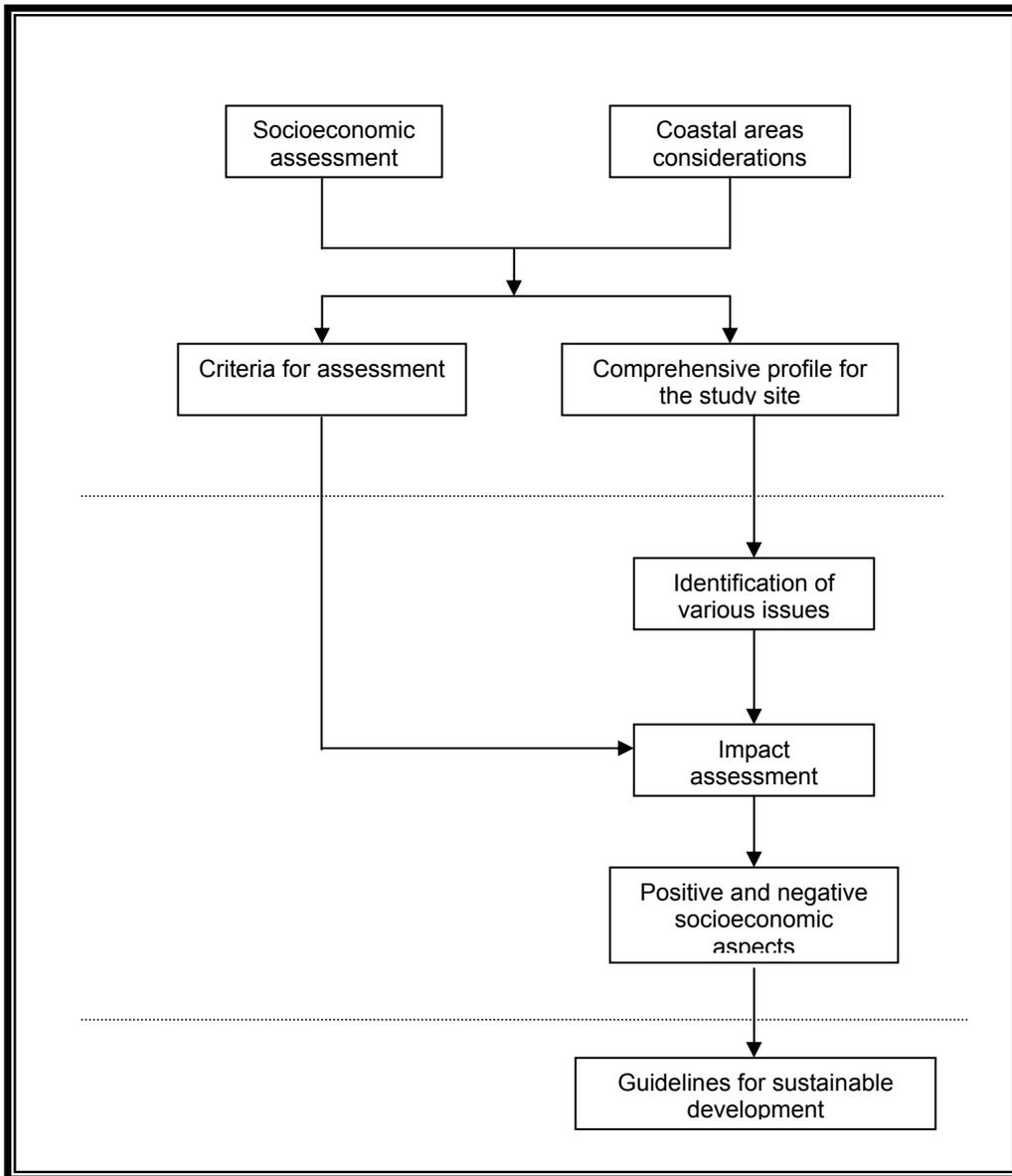


Figure (1): Methodology of socioeconomic study

5. Work plan:

Based on the methodology presented above, a work plan for the socioeconomic study was developed. This work plan includes the following tasks and activities (Figure 2):

5.1 Develop baseline conditions:

This section can be considered as a preparatory work which includes the following steps:

5.1.1 Data and information collection from secondary sources

Materials; including statistics, research work, study reports, that may provide data and information about conditions in the study site, have to be reviewed. This includes available data and information about various socioeconomic aspects, environmental quality and previous as well as current development schemes. It should be noted that various socioeconomic aspects of the study site, have to be considered comprehensively without any bias towards any of the aspect.

As Census data is relatively inexpensive and highly reliable, Census represents one of the main secondary sources of data and information. Nevertheless, there should be certain problems that are generally associated with the use of data collected from secondary sources in general and census data in particular. These problems generally are related to:

- Changes in classification way of data and definitions of variables.
- Changes in boundaries of administrative units.

Therefore, these two issues should be taken into account in dealing with data from secondary sources

5.1.2 Develop a comprehensive profile of the study site:

Depending upon the data and information that are collected from secondary sources, a comprehensive profile of study site could be developed.

The comprehensive profile should cover the following items:

- Boundaries of the study site
- Past and present :
 - Demographic structure.
 - The Economic structure.
 - Social structure.
 - Infrastructure provision.
- Development schemes in the study site, past, present and future.

Usually, such a comprehensive profile is of great importance for the following steps of the study as it highlights the character and the main features of the study site.

5.1.3 Develop a set of criteria for assessment:

A comprehensive list of all possible socioeconomic impacts and indicators should be developed, based on the provisional list described before in the manual. Thereafter, these impacts should be scoped to focus on the most important impacts to be dealt with within the context of the socioeconomic assessment.

5.2. Field work:

The field work would involve the following steps:

5.2.1 Identify required data and information

After scoping, the data and information from secondary sources about the study site and the previous development schemes should be reviewed to identify the gap of information to be collected from primary sources.

5.2.2 Conducting field surveys

After the identification of gaps in the required data and information, field surveys would be planned. This would require also the identification of the target population and sampling techniques.

5.2.2.1 Designing a questionnaire form

Such a questionnaire will have to be designed in such a way that takes into account the type of people to be covered by the survey, in terms of educational status, culture, and attitude. This aspect is very important in order to end up with the right answers needed for this research work and avoid any possible biases.

5.2.2.2 Pilot survey and feedback

In order to ensure the effectiveness and adequacy of the designed questionnaire forms, pilot survey would be conducted. The main objectives of conducting these pilot surveys is to fine tune them to attain their objectives most effectively.

5.3. Data analysis and socioeconomic assessment:

This section of the socioeconomic study will include the socioeconomic assessment of the study site depending upon the analysis of the data and information collected from primary and secondary sources.

5.3.1 Data entry and verification

Dealing with large amount of data requires a systematic approach for data coding, tabulating and entry. It should be noted that, before data entry, the collected data should be verified. Such verification could be carried out for all collected data or for the random sample of the data. This depends usually on the quality of the procedures of data collection.

5.3.2 Data analysis

Analysis will involve standard statistical analysis of the data and information collected. The analysis should be based upon the criteria developed before.

5.3.3 Socioeconomic impacts assessment and identification of main areas of concern:

One of the main objectives of socioeconomic assessment is to identify various socioeconomic positive and negative impacts. The socioeconomic impacts assessment should highlight possible relationships between assessed socioeconomic variables and the environmental quality in the study site. Such an assessment could guide the following step of the work. Also, the areas of concern (issues and opportunities) of socioeconomic structure of the study site have to be identified.

5.4 Develop a conceptual framework for sustainable development:

This section is intended to provide guidelines and concepts that may contribute to the community development. This includes, identification of the basic concepts of community development. This will involve, also, an attempt to consider various alternatives, which might alleviate the problems prevailing in the study sites. Also, this will mainly provide the required changes to enhance positive impacts and minimize negative impacts.

At this stage, a participatory approach should be followed to ensure that all stakeholders and affected groups are involved in deciding whether the development of new alternatives can be pursued.

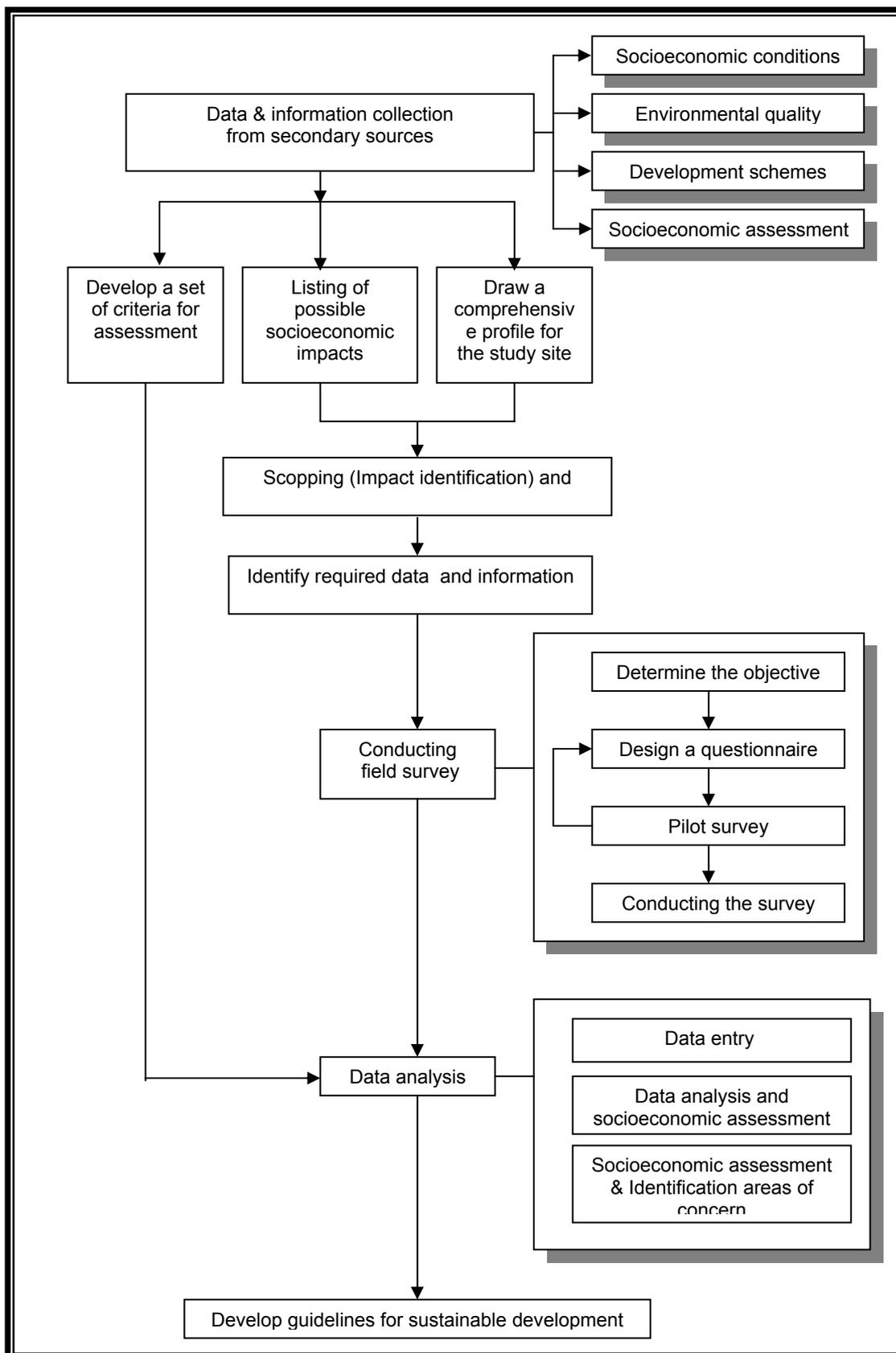


Figure (2): The work plan of socioeconomic study

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