

Social Assessment Handbook

A guide to methods
and approaches
for assessing
the social sustainability
of fisheries in Australia

FRDC ESD
Reporting and Assessment
Subprogram
Publication No. 7

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Australian Government

Bureau of Rural Sciences

**Fisheries Research and
Development Corporation**



Ecological
Sustainable Development

Ensuring fish for the future



Australian Government

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ISBN 0 642 47570 9

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The Fisheries Research and Development Corporation plans, invests in and manages fisheries research and development throughout Australia. It is a statutory authority within the portfolio of the federal Minister for Agriculture, Fisheries and Forestry, jointly funded by the Australian Government and the fishing industry.

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Foreword

Fishing is an important economic and social activity for many Australians. Both commercial and recreational fishing provide employment and income, particularly in coastal areas of the country, as well as a range of other lifestyle and health benefits for the Australian community.

The fishing sector faces many challenges, and is in many cases undergoing rapid change. Changes may be the result of government decisions about fisheries management, or of evolving market conditions and technologies.

Information on the changing social well-being of communities who are dependent on fishing activities is essential for informing decision making and strategic planning, both regionally and nationally. The Australian fishing sector has been at the forefront of recognising and analysing the social implications of changing conditions in the fishing sector.

BRS has provided a range of scientific advice on Australia's marine ecosystems and the sustainable harvesting of fish stocks through its Fisheries and Marine Sciences program. In recent years, BRS has expanded the breadth of its analysis of the fishing sector beyond the biological, through increasing analysis of the social dimensions of Australian fishing.

Foreword

This handbook represents the first comprehensive guide to methods for assessing the social well-being of those who are engaged in or dependent on fishing activities in Australia. The methods presented have been specifically adapted to be applicable in the Australian fisheries context, and tested through case studies in South Australia and Victoria. BRS was pleased to collaborate with the ESD Reporting and Assessment Subprogram of the Fisheries Research and Development Corporation (FRDC) to develop this handbook, and many members of the Australian fishing sector contributed to the project. While they are too numerous to acknowledge individually, their contributions have ensured the handbook contains best practice advice for members of the fishing industry and fisheries managers.

A handwritten signature in black ink, appearing to read 'P. O'Brien', with a stylized, flowing script.

Dr Peter O'Brien
Executive Director
Bureau of Rural Sciences

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Introduction

Over recent decades, the concept of Ecologically Sustainable Development (ESD) has increasingly informed management of natural resources such as fish. In Australia, the *National Strategy for Ecologically Sustainable Development*, accepted by all Australian governments, defines ESD as:

Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future can be increased (Commonwealth of Australia 1992).

'Fishing-related activities may contribute to ecologically sustainable development in a variety of ways, some positive and some negative. They affect the total quality of life of those directly involved, as well as that of society as a whole, through their contributions to human and ecological wellbeing. Quality of life must be measured not only in terms of employment and income, but also in terms of a wide range of other factors, such as the ability to have a satisfying family and social life.

Assessing social aspects of fishing and fishing industries can assist decision makers in many ways. Undertaking social assessment can help identify and quantify, among other things:

- the communities¹ who depend on fishing, both directly and indirectly
- the quality of life and social resilience of communities associated with fishing and fishing industries
- the contributions of fishing and fishing industries to the broader community
- the values, attitudes and beliefs associated with fishing and fishing industries by different groups.

A wide range of information can be gathered as part of a social assessment. This handbook provides a guide to planning a social assessment, social indicators that can be used to gather different types of social information on Australian fishing and fishing industries, and different methods of measuring these indicators.

BRS was pleased to collaborate with the ESD Reporting and Assessment Subprogram of the Fisheries Research and Development Corporation (FRDC) to develop this handbook. The ESD Reporting and Assessment Subprogram acts as the coordinating hub for the development of information and tools for ESD reporting and assessment. The ESD Reference Group and Working Group include representatives from most Australian fisheries agencies and fishing sectors, relevant other areas of government, FRDC and environmental groups, and acted as the steering committee for the project.

¹ The term 'community' is used through this Handbook to refer to groups of people who share particular social characteristics – they may have a similar occupation, live in a similar region, or have other similarities. When terms such as 'fishing communities' are used in the Handbook, they should be interpreted as referring to a range of different types of groups that may be involved with any type of fishing-related activity and which, although similar in some ways, also contain considerable diversity within and between communities.

Fishing activities affect the total quality of life of those directly involved as well as society as a whole.

Scope of the handbook

This handbook provides a guide to planning and undertaking a social assessment of fishing-related activities in the Australian *commercial* and *recreational* fishing sectors. It can be used to help plan and guide assessments of those who directly undertake fishing, as well as individuals and groups who are otherwise dependent on fishing activities – for example, suppliers of fishing equipment and gear, fish processors, or the population of coastal towns with a high dependence on fishing.

The handbook does not specifically examine social assessment of indigenous fishing communities, and has limited applicability to assessing social and cultural aspects of indigenous fishing activities.

If indigenous fishing communities are to be assessed, it is recommended that considerable consultation be undertaken with the communities prior to implementing a social assessment process, to identify approaches that are appropriate in individual communities for gathering and using information about the social and cultural aspects of fishing.

Assessing social aspects of fishing can assist decision makers.

What is social assessment?

How is it helpful?

A wide range of terms are used to refer to the process of social assessment. These include terms such as 'social profiling' and 'social impact assessment'. Often these terms are interpreted in different ways, leading to confusion. In this handbook, the term 'social assessment' is used to refer to:

... an analysis of the community designed to ascertain how the community is organized, how its people relate to one another, how decisions are made and other factors.
...The SA [social assessment] describes current conditions, but unlike SIA [social impact assessment], it does not attempt to forecast outcomes if things change (USA Government Services Administration 1998).

This handbook examines methods for analysing the current and historical social conditions of people dependent on, and associated with, fisheries and fishing industries. It covers what are commonly referred to as the 'scoping' and 'profiling' stages of a social impact assessment (Taylor *et al.* 1995). A brief outline is also provided explaining how social assessment can be built on to assess potential impacts of future changes through what is commonly termed 'social impact assessment' (SIA).

Social assessment can provide a range of useful information for anyone involved in, or interested in, fishing and fishing industries. A social assessment can:

- *Identify who undertakes or is dependent on fishing-related activities – 'fishing communities'.* Who is reliant on fishing, or on others who fish, for their livelihood? Whose social networks are reliant on fishing? To what extent are they reliant? Do they have other sources of income and support? Who is indirectly dependent on fishing and fishing industries (for example schools or local businesses)? A range of fishing communities may be identified, such as communities of commercial fishers who all operate in the same fishery, fish cooperative or geographic region; a community of recreational fishers; or a community dependent on fish processing activities, amongst others.
- *Identify the quality of life and social resilience of fishing communities.* Once fishing-dependent communities are identified, the ways fishing and fishing industries impact on them socially can be examined. Are members of these communities healthy and happy? What capacity do different people and groups have to adapt to change? What types of social capital support fishing dependent communities?

Social assessment can:

Identify those dependent on fishing activities.

Analyse quality of life and social resilience of fishing communities.

Identify how fishing contributes to the broader community.

Identify values, attitudes and beliefs associated with fishing.

- *Identify the contributions of fishing communities to the broader community.* People working or participating in fishing and fishing industries contribute in a range of ways to the broader communities they live and work in. Social assessment can identify how fishing communities contribute to the broader community, and their importance in supporting local services, businesses and social networks.
- *Identify the values, attitudes and beliefs associated with fishing and fishing industries by different groups.* Understanding the social impacts of fishing and fishing industries requires an understanding of the different values, beliefs and attitudes associated with fishing activities. What are the values, beliefs and attitudes of different fishing communities? What are the values, beliefs and attitudes of the wider community about fishing and fishing industries?

How to use this handbook

This handbook guides you through the process of designing a social assessment that is appropriate to your needs. The guide is structured into six parts:

1. *Planning your social assessment process.* This section guides you through determining the type of social assessment you want to undertake, and helps you design it.
2. *Types of data.* An overview of types of data that may be included in a social assessment and key social indicators that may be examined, is given.
3. *Data collection methods.* A key issue in most social assessments is identifying how to gather an appropriate level of information within given resource and time constraints. Different methods that can be used to gather particular types of data are described.
4. *Using the results of social assessments.* This section briefly discusses how the results of a social assessment may be used to support decision-making processes, or to assess the impacts of a proposed change.
5. *Evaluating social assessments and reports.* This section provides guidelines for assessing the appropriateness, scope, and quality of social assessment proposals or reports.
6. *Further reading.* A list of useful references on social assessment relevant to Australian fishing and fishing industries is given.

Use this handbook to help plan and guide social assessment of commercial or recreational fishing sector activities.

The background of the page is a close-up photograph of numerous seashells. The shells are mostly white with dark, concentric growth lines. Some shells are open, revealing a smooth, iridescent interior in shades of orange, red, and purple. The shells are piled together, creating a textured, layered appearance. The lighting is bright, highlighting the natural patterns and colors of the shells.

Planning your social assessment process

- Identifying the goals and boundaries of the assessment
- What am I assessing?
- How much funding is available and how can it be used most effectively?
- How much time do I have?
- What types of social information do I need?
- What information is already available?
- Identifying the process to be used in the assessment
- Who should undertake the assessment?
- How participatory will the assessment process be?
- Establishing an advisory group
- Defining roles and responsibilities of the advisory group

Planning your social assessment process

Identifying the goals and boundaries of your assessment

What am I assessing?



Identifying the goals and boundaries of the assessment.

To identify the goals and boundaries of an assessment, you need to know the answers to the following questions:

How much funding is available and how can it be used most effectively?



What am I assessing?

The type of situation you want to assess and the types of information you want to gather will affect the methods you use. You may be assessing the social aspects of a particular fishery or fishing industry, or of all fishing-related activities in a particular region. Alternatively you may be asking more specific questions about social aspects of fishing or fishing industries. Common types of social assessment for fishing communities are described in the table opposite.

How much time do I have?



How much funding is available and how can it be used most effectively?

The type of social assessment you can do depends on the amount of funding available, and your assessment of the benefit versus cost of undertaking different levels of assessment. The methods described in this handbook are designed to provide options for small (\$), medium (\$\$) or large-scale (\$\$\$) assessments.

What types of social information do I need?



How much time do I have?

The type of social assessment you undertake also depends on the amount of time available for the process. The methods described in this handbook include methods for rapid (< 6 weeks), medium (6–12 weeks) or longer (> 12 weeks) assessments.

What information is already available?



What types of social information do I need?

Not all social assessments gather the same types of data. Depending on the questions being asked, a range of types of data may be useful. This handbook discusses common types of social information gathered as part of assessments and useful indicators for measuring different social characteristics.

What information is already available?

The planning stage is a good time to find social information that already exists about the fishing communities to be studied as part of the assessment. Often the people who have the best knowledge of previous work are the members of the communities being studied – they know if they have been asked to participate in similar research in the past!

Common types of social assessment of fishing communities

Social assessment of a particular fishery or fishing industry	<p>The social impacts of any single fishery are often spread quite widely geographically, with catches unloaded in more than one port, equipment purchases from many places, and fishers living across a wide geographic area. This type of social assessment often focuses on examining:</p> <p>(a) social information about those directly involved in the fishery/industry, and</p> <p>(b) the geographic spread of social impact of the fishery/industry.</p>
Social assessment of fishers who operate in more than one fishery	<p>This type of assessment aims to examine a particular group of fishers – for example, those who land catch at a particular port from a number of different fisheries. As in assessing the social aspects of a particular fishery or fishing industry, social assessment of a group of fishers often focuses on examining:</p> <p>(a) social information about those undertaking fishing, and</p> <p>(b) the geographic spread of social impact of these fishers in the broader community.</p>
Assessment of the contributions of fisheries/fishing industries to a geographic region	<p>Rather than assessing the social conditions associated with a particular fishery/industry which may be spread unevenly across a large geographic region, you might be interested in assessing the impact of fishing and fishing industries on a specific community, town or region.</p> <p>This may involve analysing the impacts of only a single fishery/industry, or of a number of fisheries and fishing industries, operating in the community/town/region of interest. These types of assessment often initially focus on identifying how many fisheries and fishing industries are active in the geographic region being studied, and which of their socio-economic activities occur within and outside the region.</p>
Other types of social assessment	<p>Social assessment can be used to answer a wide range of questions, which may be focused on a fishery (commercial or recreational), a fishing industry, or a geographic region, as discussed above; but may also examine questions that do not fit neatly into one of these categories. If the questions to be answered do not fit into the categories above, in planning your social assessment you should initially identify:</p> <p>(a) who is being assessed, and</p> <p>(b) the geographic spread of the assessment.</p>

Identifying the right process for your assessment

Who should undertake the assessment?



How participatory will the assessment process be?



Establishing an advisory group



Defining roles and responsibilities of the advisory group



Identifying the process to be used in the assessment

Who should undertake the assessment?

Quite often those initially planning social assessments will not undertake the assessment themselves.

Social assessments are usually undertaken by researchers who may be based at universities, in the private sector (eg consultants) or in government or other research agencies. Researchers from a diverse range of social science disciplines undertake social assessments, including anthropologists, demographers, geographers, social psychologists and sociologists, amongst others. The choice of appropriate researcher will depend on factors such as the types of data to be collected, and the relevant experience of the researcher in analysing that type of data.

To assist in making the best choice, you need to clearly state the *goals* and *key questions* of the social assessment, and the *types of data* likely to be needed. This handbook should be used to help define the scope of the proposed assessment.

How participatory will the assessment process be?

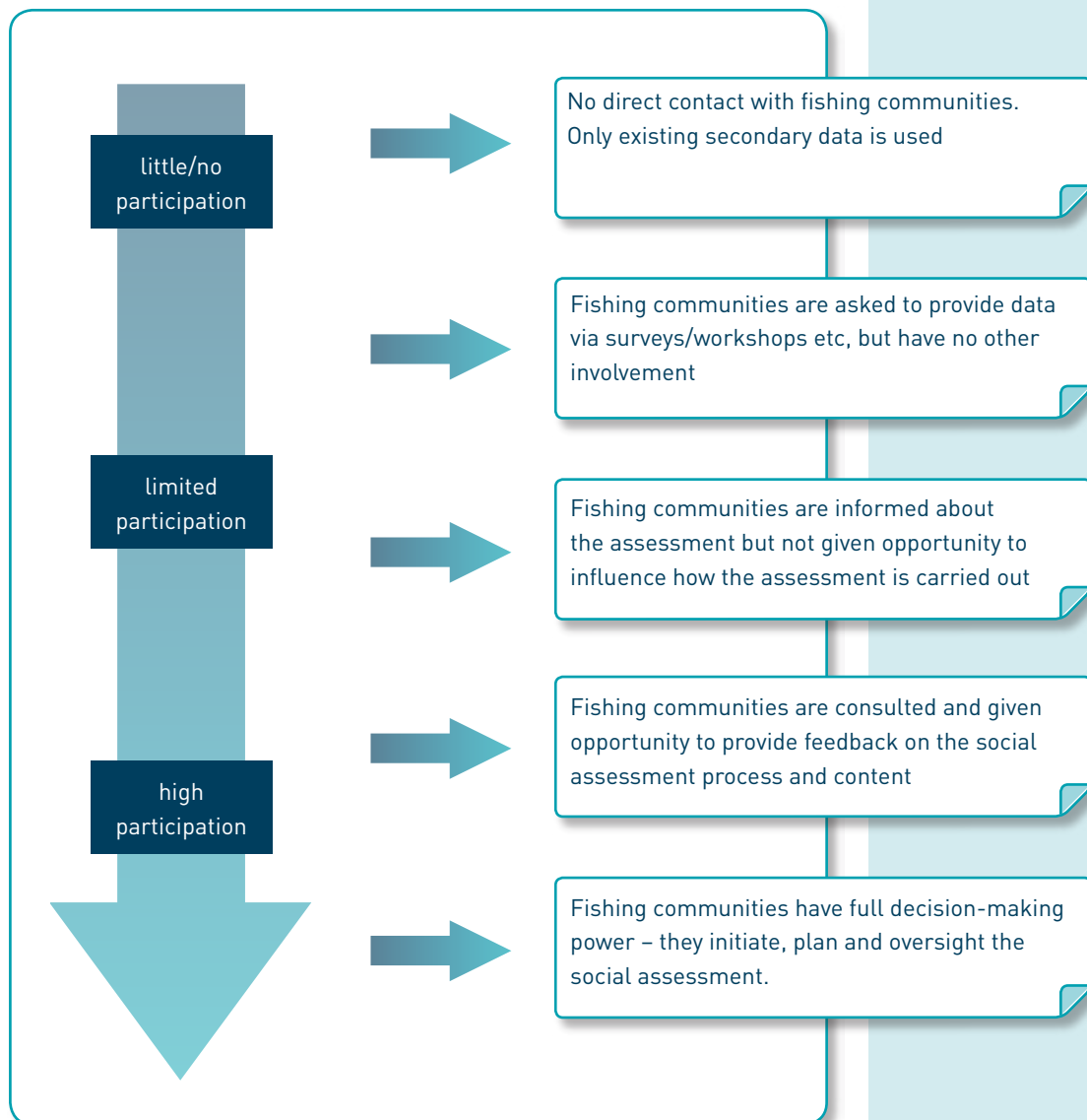
Social assessments may be participatory or non-participatory in nature. The term 'participatory' refers to the level of participation in the social assessment by members of the fishing or other communities being studied. This means involvement not only through provision of information, but also in the design, implementation, analysis and communication of the assessment.

The diagram opposite shows different levels of participation that may occur in a social assessment. Detailed information on techniques used to achieve participation in a range of processes can be found in *Consulting Communities* (Coakes 1999).

The more participatory the social assessment, the more in-depth results you are likely to achieve. Input from members of fishing communities throughout the assessment helps identify key challenges and opportunities related to the assessment. Fishing community members can give researchers feedback and guidance on the types of information they are gathering and analysing, ensuring the assessment focuses on issues of relevance to fishing and fishing industries.

Planning your social assessment process

Different levels of participation in social assessment



Establishing an advisory group

Even where an assessment will not gather data directly from communities, it is recommended that an advisory group that includes stakeholders from the communities being studied be created to help guide the assessment. This allows better targeting of the assessment to the unique needs and situations of different groups and communities, ensuring that a 'one size fits all' approach is not used.

The key issue in creating an advisory group is to identify an appropriate range of representative people, and not to leave out important views or perspectives relevant to the assessment.

A good way of initially identifying groups and individuals who should be involved in an advisory group, or in other aspects of a social assessment, is to use a 'snowball' approach. In snowball sampling, you draw up an initial list of relevant groups/individuals and contact each, asking their advice on who are the key stakeholders of relevance to the planned assessment. You then contact the different groups/individuals identified, and continue this process until no new groups are identified. This ensures that a complete list of key stakeholders is drawn up at an early stage, and representatives from these can be brought together to form an advisory group.

Defining roles and responsibilities of the advisory group

A clear idea of the role of the advisory/oversight group should be developed at the start of the assessment, including:

- What aspects of the social assessment will the group advise on?
- At what stages is input from the advisory group needed?
- How often will the group meet and how will meetings be structured?

Types of data



- Who should be assessed?
- Identifying commercial fishers
- Identifying recreational fishers
- Identifying fishing-related business
- Identifying geographic communities in which fishing-related activities take place
- Identifying other relevant groups
- Types of social information
 - History of fishing and fishing-related activities
 - Social profiles of fishing communities
 - Quality of life of fishing community
 - Social capital
 - Value, attitudes and beliefs
 - Spatial relationships linking aquatic resources and fishing communities

Types of data

Types of data

Who should take part in the assessment?



The types of data gathered as part of a social assessment will vary depending on the goals of the assessment. For example, an assessment that asks 'what are the social factors affecting the rate of turnover of employment in a particular fishery?' will require different data from an assessment asking 'how do fishing sector activities contribute socially to a particular region?'

A number of types of data relevant to social assessment of Australian fishing and fishing industries are outlined here. The data required for an assessment is divided into two broad types:

How can different groups be identified and contacted?



- **data identifying *who* should be assessed**
- ***social data* about the particular groups that are being assessed.**

A social assessment may gather a number of types of data about one or more fishing or regional communities.

What types of social information are needed about the groups/communities being assessed?



Sometimes identification of key groups to be assessed and gathering of social information can occur at the same time. For example, a survey of fishers can gather social information about those fishers, while at the same time asking them to identify the communities they live in, and the fish processors they sell their catch to.

Who should be assessed?

Once the scope, key questions, and process for undertaking a social assessment have been determined, the first step in gathering data is to identify *who* is being assessed. This can be challenging, particularly where it is difficult to contact or identify fishers or fishing-dependent communities.

It is important to recognise that there are many different types of fishers and fishing communities – within each of these groups, a large number of different sub-groups may exist of relevance to the assessment. Each broad group is discussed in turn below.

Identifying commercial fishers

Licence data

Most commercial fisheries in Australia require some form of licence/permit/authority to be assigned before a person or business is allowed to fish. Fisheries management agencies hold this *licence data*, and this is a useful method of identifying commercial fishers.

If you know the specific fishery/fisheries of interest, you will need to contact the relevant agency to find out about the types of data accessible. Data availability varies between agencies and fisheries, but you may be able to:

- Obtain a list of contact details enabling direct survey of licence holders
- Obtain details on numbers of fishers operating in particular fisheries, and some basic socio-economic characteristics eg age of licence holders, and/or
- Identify where fishers are located, if you can access data on the homeport/home address of fishers. This will help identify fishers of interest to the social assessment, particularly if the assessment is focusing on a specific geographic region, rather than an entire fishery.

Fish receivers

In some regions, it is possible to identify fishers by accessing records held by *fish receivers*, such as fishing cooperatives or processors. While cooperatives do not operate in all States, where they do operate they are a good way to identify fishers landing catch into and/or living in a particular region, as cooperatives are often the initial point of landing for the majority of fish caught in a region. In other cases, a wide number of fish receivers may receive catch from a particular region, and may all need to be contacted to accurately identify the fishers landing catch in that region.

The types of records accessible will vary between fish receivers. It is not always possible to obtain permission to access records.

Surveys of fishers

The fishers identified through licence data, or through different fish receivers, may not represent the entire community of those who undertake commercial fishing activities. In some States, crew members working on fishing boats do not need a fishing licence, and so will not be identifiable through licence records. In addition, many fishing businesses include both a fisher operating on a boat and a fishing business partner (paid or unpaid) who manages the financial and administrative aspects of a fishing business. To identify all the people who work directly in fishing businesses, it may therefore be necessary to survey licence holders or individuals landing catch at different fish receivers to obtain details of the number of people who are working in their fishing business (paid and unpaid).

Who should be assessed?

➤ **Commercial fishers** can be identified using licence data or records held by fish receivers, and through surveys of fishing licence holders

➤ **Recreational fishers** can be identified through licence data, observation/survey at recreational fishing locations, or surveys of the general population

➤ **Fishing-related businesses** can be identified using directories, surveys of fishers/intermediate businesses, or direct observation

➤ **Communities in which fishing sector activities take place** can be identified using surveys of the fishing sector, through licence data and/or catch and effort records, or inferred from their geographic location.

Surveying requires obtaining a list of names and addresses, from either licence databases or from fish receivers. If confidentiality provisions prevent direct access to names and addresses, you may be able to organise a fisheries management agency or fish receiver to distribute surveys on your behalf.

Identifying recreational fishers

Licence data

In some states, recreational fishers must purchase a *recreational fishing licence*. Depending on the nature of the licence, it may be possible to determine basic estimates of numbers of recreational fishers, or to access addresses of licence holders. However, this is limited to those regions where a licensing system is in place. Even where there is a licensing system, some groups may not be required to purchase a licence to undertake recreational fishing (eg pensioners), limiting the usefulness of recreational licence data.

Observation at recreational fishing locations

A common way of identifying recreational fishers is through observing (and often at the same time gathering social information about) recreational fishers at *known recreational fishing locations* such as boat ramps, marinas or fishing clubs. This can allow basic counts of numbers of fishers, and a contact point for fishers. However, the method is limited in that different types of recreational fishing take place from a wide range of different locations. It is important to identify variances in the people undertaking recreational fishing depending on season, time of week, time of year, location and weather, amongst others. Repeated observations are usually necessary. Sometimes it may also be useful to survey recreational fishers who are taking part in *charter fishing trips*, particularly if the charter sector is a specific area of interest to the social assessment.

Random survey of general population

A third approach is to *survey the general population* to obtain a sample of recreational fishers. This can identify the proportion of the population taking part in recreational fishing, and also gather social information about those fishers at the same time. This is the most comprehensive approach to gathering data on recreational fishing, and was used in *The National Recreational and Indigenous Fishing Survey* (Henry and Lyle 2003).

Identifying fishing-related businesses

Fishing-related businesses may include businesses supplying goods or services related to commercial or recreational fishing, recreational charter fishing businesses, or processors/producers of seafood products.

Directories

Fishing-related businesses can be identified by reviewing appropriate directories in which they are likely to advertise or be listed. However, a careful assessment is needed of the level of coverage of the directory.

Survey of fishers and intermediate businesses

Surveys of fishers can be used to identify fishing-related businesses, for example, by asking fishers to identify where they purchase supplies or equipment, and where they sell their catch. If examining a chain of impacts, intermediate businesses identified through surveys of fishers can also be surveyed to find out where they purchase/sell to, and so on.

Observation within a particular region

If the goal is to identify fishing-related businesses within a particular region, it may be possible to physically survey the town/s in that area to identify fishing-related businesses located in that region. The feasibility of this approach depends on the size of the region being studied.

Identifying geographic communities² in which fishing-related activities take place

A social assessment may study the characteristics of the broader community living in a region where fishing or fishing-related activities take place. This requires identifying the regions where fishing-related activities take place, so that the broader community – in other words, the populations living in those regions – that may be impacted by those activities can be identified.

When assessing a pre-defined region, identifying the geographic, or 'place-based' community of interest is relatively simple – it is the population living in the region being studied.

It is not as easy to identify place-based communities in situations where specific information about levels of dependency and association with fishing are needed, or where the regions in which fishing-related activities take place need to be identified.

² Geographic, or 'place-based' communities are geographically located populations. Communities of fishers, fishing-related businesses, and other groups discussed in this Handbook are 'communities of interest', which are not necessarily defined by their geographic location.

How can
I identify
fishing related
businesses?

Survey of fishers or fishing-related businesses

Surveys of fishers and/or fishing-related businesses (depending on the scope of the social assessment) can most accurately identify communities in which fishing-related activities take place. Surveys can ask specific questions about where fishing-related activities are undertaken. This can identify the geographic location of communities in which fishing-related activities occur, which may be some distance from where fishing itself takes place. Methods such as *Town Resource Cluster analysis* are used to make links between aquatic resources and the human communities dependent on them (see Fenton and Marshall 2001).

Fisheries licence, catch and effort data

The type of information available from fisheries licence data or from catch and effort data, varies between fisheries management agencies. Where homeport or port of landing are recorded as part of licence and/or catch and effort data, these can be used to broadly identify where fishers live and/or land catch, and hence help identify the locations of fishing-dependent communities. This approach does not allow identification of communities that are indirectly dependent on fishing, for example through downstream processing.

Geographic proximity

A simple approach to identifying communities likely to be dependent on fishing-related activities is to examine communities living in coastal or riverine areas where fishing activities occur. In the case of land-based aquaculture, this approach would examine the communities living near land-based aquaculture operations. As many fishing-related activities tend to occur close to coasts or rivers, or other water resources such as dams, this is a useful way of examining communities likely to be most dependent on, and associated with, fishing activities. However, this approach has limitations. It should primarily be used where initial consultations with fishing communities have identified that a large part of their activities do take place in communities located close to the aquatic areas in which they fish.

Identifying other relevant groups

Other groups that may require identification and contact include non-governmental organisations (NGOs), such as *fishing organisations* or *environmental NGOs*; *government agencies* responsible for managing fisheries; and relevant *research groups*. Identifying and contacting these groups is usually relatively easy.

It is important to recognise and identify any indigenous fishers and fishing-related activities occurring in regions or communities being studied as part of a social assessment. These activities are often not widely understood outside the indigenous community. While this Handbook does not provide a specific guide to social assessment of indigenous fishing activities, any assessment should begin by seeking advice from relevant indigenous and related organisations such as *land councils* as early as possible in the social assessment process.

Types of social information

Many types of social information can be examined as part of a social assessment. Key types of social information relevant to Australian fisheries and fishing industries are discussed in detail in this section.

Developing a *history of fishing* in a particular region, fishery or fishing industry can help build understanding of historical changes affecting the current social conditions of the region, fishery, or industry.

The social environment of the broader community may impact on the quality of life of those in the fishing sector, while activities of the fishing sector may equally have important social impacts on the broader community. It is therefore important to develop a *social profile* of fishing communities and of people living in regions where fishing-related activities take place.

The future of those involved in fishing depends greatly on their social wellbeing, or *quality of life*. A wide range of measures of quality of life of individuals can be used. The quality of community life is often also measured through measures of *social capital*.

In addition, understanding different *values, attitudes and beliefs* held about fishing can help build a better understanding of the choices and decisions made about fishing by both the fishing and non-fishing communities.

Key types of social information

- **History of fishing**
 - Development of current fishing communities
 - Regulation and management of fishing over time
 - Fishing methods and practices
- **Social profile of fishing and general communities**
 - Age, gender, education, income
 - Dependence on fishing
 - Employment/unemployment
 - Other characteristics
- **Quality of life**
 - Life satisfaction
 - Work satisfaction/work conditions
 - Stability of/access to industry
 - Training/education opportunities
 - Physical and mental health
 - Income (fishing and non-fishing)
- **Social capital**
 - Social support networks
 - Access to services
 - Links to family, friends, fishing sector, broader community
- **Values, attitudes and beliefs**
 - Of fishing community
 - Of general community about fishing
- **Spatial links between aquatic resources and communities**
 - Examining locations of social activities and populations in relation to aquatic resources they use

Historical data can identify the causes of current social conditions, and therefore inform actions taken to change those conditions.

It is often important to gather information about the spatial location of the communities and/or fishing activities being studied. This allows analysis of where the social impacts of a particular fishing activity occur in relation to the fishing resource, and of any differences between and within fishing communities. A particularly useful method for examining spatial linkages between aquatic resources and communities that use them is *Town Resource Cluster* analysis (see Fenton and Marshall 2001).

History of fishing and fishing-related activities

What types of data are collected and analysed?

Historical data may be used to develop:

- a description of the development of fishing communities, including key events and actors
- a history of governance of the fishing sector/s being studied, including changes in management and regulation over time
- a history of the culture of different fishing communities.

Why is this useful?

Understanding the history of a fishing community can help explain why and how the community has reached its current social state. Without this historical context, it can be difficult to analyse the origins of some of the social conditions observed, and therefore to develop appropriate actions to improve social conditions.

What methods can be used?

Historical data are commonly collected through:

- secondary analysis of relevant documents such as reports, media articles, government and industry records
- qualitative interviews with key stakeholders who have relevant historical knowledge
- workshops or focus groups involving carefully selected participants with historical knowledge of the fishing sector.

Social profiles of fishing communities

What types of data are collected and analysed?

A social profile analyses socio-demographic data about a particular community. This data describes the social characteristics of a population (as opposed to the biological characteristics). Socio-demographic measures build on traditional demography, which measures characteristics such as

birth and death rates of a population, to provide a range of social statistics about a population. Typical measures might include average and median age of the population being studied, gender ratios, dependency ratios, employment in different industries or tasks, or income, amongst many others.

Why is this useful?

Social profiles provide information about key social strengths and vulnerabilities of the fishing community. Profiles can be used to examine socio-demographic differences between the fishing community and the general community, or within the fishing community over time.

The information gathered can help identify and predict particular needs of the community being studied, such as training, education or health services.

Useful measures and indicators

Measures and indicators useful for profiling fishing communities in Australia are outlined on the next two pages.

What methods can be used?

The data required for social profiling are usually collected and analysed by:

- accessing and analysing existing secondary data sets, such as data from the Australian Bureau of Statistics *Census of Population and Housing* or fisheries licence data
- quantitative surveys of fishing communities.

(continued on page 24)

Social profiles provide information on key social strengths and vulnerabilities of communities.

Key social indicators used to profile fishing communities

Indicator	Description and uses
Education level	<p>This may include measuring the level of formal education reached, and/or measuring the years taken to develop fishing skills (formally or informally). This measure can help provide a picture of the skill sets of fishing communities.</p> <p>Understanding education levels allows better targeting of training and education programs and communication strategies.</p>
Number of years participating in fishing sector	<p>Measuring number of years spent in fishing helps build a picture of the level of dependence of individuals on fishing as a livelihood, or in the case of recreational fishers, the level of engagement with recreational fishing. This indicator can also help identify mobility of those in the fishing sector, and is an indicator of level of attachment to fishing.</p>
Generations of family involved in fishing	<p>As with number of years of employment/participation in fishing activities, understanding family history of involvement in fishing can help build a picture of levels of cultural and social dependence on, and attachment to, fishing-related activities.</p>
Fishing methods/ licences held/ equipment	<p>Measuring the types of investment people have made in fishing helps build a profile of levels of dependence on/engagement in fishing-related activities. This assists analysis of constraints affecting adaptability of fishing businesses.</p>
Length of residence in current hometown	<p>This measure can help determine the mobility of those employed in/participating in fishing activities, and the level of attachment to/ dependence on a particular location.</p>
Household spending profile	<p>This measures how much is spent on common household items such as groceries, clothing and footwear, fuel, health services, and entertainment activities. This can be compared with other populations to find whether those involved in fishing activities have unique spending characteristics. This indicator assists identification of the contributions of the fishing sector to local/regional economies, and the dependence of particular regions on fishing activities.</p>
Ethnic characteristics	<p>Ethnic characteristics usually refers to the country of birth of the population being examined, but may also refer to the ethnic group a person identifies with no matter where they were born. This indicator can help identify the different cultures involved in different types of fishing activities. It may also help identify regions/ fisheries where communication about fishing should occur in more than one language in order to effectively communicate with a range of groups.</p>
Number employed or participating in fishing sector of interest	<p>Various measures and categories of employment can be used, including:</p> <ul style="list-style-type: none"> • total number employed/participating • number employed or participating in different tasks, types of fishing, fishing sectors, or types of employment (eg 'owner-operator' and 'employee of owner-operator' might be separate categories) • location of employment/participation, allowing a picture to be built of the spatial patterns of employment/participation in fishing activities. <p>This indicator shows numbers active in fishing and can assist in a range of analyses, such as predicting the scale, size and cost of particular programs or actions.</p>

Types of data

Indicator	Description and uses
Number of people dependent on those employed or participating in fishing sector of interest	<p>This measures the number of people who are dependent on those directly employed in, or participating in, fishing activities, and is reported as a ratio of dependence. This may include:</p> <ul style="list-style-type: none"> • overall dependence • youth dependence (ratio of the number of children under age 16 per person working/participating in fishing sector) • aged dependence (ratio of the number of dependants over age 65 per person working/participating in fishing sector) • categorisation of patterns of dependence (eg examining whether people employed in particular fisheries have more dependants on average than those in other fisheries). <p>This indicator can help identify levels of dependency on fishing, and allows analysis of direct impacts of changes to fishing. It can also assist analysis of the spread and magnitude of current contributions of the fishing industry to particular communities.</p>
Median age	<p>The median age of the population of a fishing community can be compared to median ages of people in other occupations or the general population to see if those involved in fishing activities are younger or older on average than those in the region or in other industries. Measured over time, it allows trends in median age to be observed.</p> <p>Changes in median age may reflect viability of, and entry costs to, commercial fishing and help identify levels of recruitment into the industry – an increase may reflect lower numbers of young fishers entering the industry. Changes in age may help in identifying skill and training needs, eg more young fishers may require training programs to assist in understanding regulation of a particular fishery.</p>
Gender	<p>Allows identification of gender balance of those involved in different types of fishing activities. This can assist analysis of particular needs of different genders, and targeting of programs to genders if and as needed.</p>
Income	<p>Income may be measured in terms of individual and/or household income. The patterns of income received by individuals/households in fishing communities can be compared to appropriate regional, industry, state and/or national averages to see if those taking part in fishing tend to have different income levels from those in the comparison regions/industries etc. Income indicators help measure stability and viability of commercial fishing, or changes in who undertakes recreational fishing, over time.</p>
Others	<p>A range of other indicators may be useful to profile a fishing community in particular circumstances. It is useful to explore potential indicators with members of the communities being studied to help identify measures and indicators of particular use in different situations.</p>

Social profile of regions in which fishing communities live

What types of data are collected and analysed?

As in profiling a fishing community, a social profile of the population of a region in which fishing communities are located, or undertake activities, provides socio-demographic data about the population of that region.

Why is this useful?

Profiling the region in which a fishing community lives and/or works helps identify key social issues facing that community, which may impact on the fishing community. It also helps identify any socio-demographic differences between the broader community and the fishing community in that region

Useful measures and indicators

Common indicators included in social profiles of the populations of regions in which fishing-related activities take place are similar to those used when profiling fishing communities. They may include:

- total population, population change over time
- labour force participation
- unemployment
- key types of employment (by industry, sector or other category)
- dependency ratios
- median age
- income
- education
- proportion of population employed in fishing-related activities
- economic diversity of local economy
- household expenditure
- other indicators such as home-ownership levels.

What methods can be used?

The data required for profiling the total population of a town/region is usually collected and analysed by:

- accessing and analysing existing secondary data sets, such as data from the Australian Bureau of Statistics *Census of Population and Housing*
- quantitative survey of the general community (less commonly used).

In general, profiles of the population of a particular region are carried out by accessing and analysing data from existing secondary data sets, due to the high cost of directly surveying the general population in a region.

Quality of life of fishing community

What types of data are collected and analysed?

'Quality of life' is a concept that used to encompass many different aspects of social wellbeing and happiness. It is usually defined as including measures of physical, mental and social wellbeing. Intellectual, economic and spiritual wellbeing may also be included.

The types of indicators that can and should be used to measure quality of life are widely debated. A wide range of indices have been developed to measure quality of life in different situations and for different communities.

Measures of quality of life relevant to Australian fishing communities presented in this handbook were developed through a review of previous work on the subject, and through discussions with members of Australian fishing communities.

Why is this useful?

Measuring quality of life allows analysis of how quality of life differs between different fishing communities and between people within those communities, and whether quality of life is changing over time. This can then inform development of programs and measures aimed at improving particular aspects of quality of life for fishing communities.

Useful measures and indicators

Quality of life is measured in one of two ways: by measuring a person's own perceptions of their wellbeing; or by measuring indicators thought to represent wellbeing, such as average life span, or income.

Measures of a person's own perceptions may include:

- measures of their overall life satisfaction
- measures of their satisfaction with their work (if employed in fishing as a paid or unpaid worker)
- measures of their satisfaction with their fishing activities (if not employed in fishing, eg recreational fishers)
- measures of their physical and mental health (for anyone in a fishing community)
- measures of social capital, which reflect quality of community life rather than of individuals (discussed in the next section).

Quality of life is a concept used to encompass many different aspects of social well-being and happiness.

The types of questions that might be included in surveys about these different categories are outlined in the table below, and example question sets can be found in Schirmer and Pickworth (2005ab).

Aspects of quality of life that may be examined in a social assessment

Quality of life category	Topics on which survey questions might be asked (see Schirmer and Pickworth 2005ab for example survey questions)
Life satisfaction	<p>Satisfaction with:</p> <ul style="list-style-type: none"> • life in general • present financial situation (income, debt) • health • health of members of family • local area/region the person lives/works in.
Work satisfaction (for those employed in fishing)	<ul style="list-style-type: none"> • income from fishing • amount of challenge and variety in work • autonomy in work • balance between work and home/personal life • management/regulation of fishing activities • security of future in fishing • stability of industry and cost of entering industry • work hours • physical conditions of work, including health and safety at work. <p>It is a good idea to ask questions about the level of <i>satisfaction</i> with these elements, and also to ask how <i>important</i> each of these elements is to different people.</p>
Satisfaction with fishing activities (for those not employed in, but partaking in, fishing activities, eg recreational fishers)	<ul style="list-style-type: none"> • management/regulation of fishing activities • motivations for fishing • rating of sense of wellbeing gained from fishing activities.
Physical and mental health	<ul style="list-style-type: none"> • survey of health impacts (mental and physical) experienced by those involved in fishing-related activities, or those dependent on fishing-related activities. Includes measures related to physical health, stress levels, mental health.

Secondary indicators³ used to measure quality of life of fishing communities vary. Many of the indicators used in social profiles may be used as 'proxy' indicators of quality of life. Social profile indicators sometimes used as proxies to measure quality of life include income and education level.

However, it is important to recognise the limitations of using secondary data as a measure of quality of life. For example, formal education levels achieved may not reflect the quality of life of those employed in commercial fishing, who have developed sophisticated and complex fishing skills and knowledge through working in fishing, rather than through formal training.

Other secondary indicators that may usefully measure some aspects of the quality of life of commercial fishers and their families in addition to those discussed in the social profiling section, include:

- rate of licence/quota/share turnover in commercial fisheries
- cost of staying in the industry, eg licence fees, business costs
- cost of entering the industry.

Information on these indicators can be accessed from sources such as fisheries management agencies.

What methods can be used?

Measures of quality of life can be gathered using a range of methods.

In general, measures of people's perceptions of their quality of life are gathered via qualitative or quantitative surveys, while measures of indicators thought to represent quality of life are based on secondary data.

It is important to recognise the limitations of using secondary data to measure quality of life.

³Indicators that can be measured using existing sources of data rather than requiring survey of the communities of interest

Levels of social capital can indicate the quality of life and well being of communities.

Social capital

What types of data are collected and analysed?

The term 'social capital' has various definitions. Some representative definitions include:

The degree to which a community or society collaborates and cooperates (through such mechanisms as networks, shared trust, norms and values) to achieve mutual benefits (Office of the Voluntary Sector 2003).

Social capital represents the degree of social cohesion which exists in communities. It refers to the processes between people which establish networks, norms, and social trust, and facilitate coordination and cooperation for mutual benefit (NSW Health n.d.).

Social capital is considered a measure both of quality of life of individuals and, importantly, of the quality of life and wellbeing of communities.

Measures of social capital collect information on the social networks, social trust, and levels of cooperation and interaction between people. Often, measures focus on examining the opportunities for networks, communication and trust – for example, the opportunities fishers have to meet and interact.

Why is this useful?

Social capital measures help to assess the social resilience of the fishing community, and to answer questions such as: What formal and informal support networks can members of fishing communities turn to if they need advice, information, or want to take collective action on a particular issue? How strong are the links and networks of the fishing community? Are there social networks that can be tapped into to help communicate with fishing communities?

Identifying and understanding social capital can inform the design of programs that improve social support for the fishing community, and can be used to inform assessment of how proposed changes may impact on fishing communities.

Useful measures and indicators

Measures and indicators of social capital are listed in the table below. They may include measures of the networks and institutions related to:

- family and friends of those in fishing communities
- fishing activities of those in fishing communities
- links between fishing communities and the broader community.

What methods can be used?

Both qualitative and quantitative surveys are used to measure social capital. There is usually little if any existing secondary data available on social capital for fishing communities.

Aspects of social capital that may be examined in a social assessment

Category	Measures/indicators (see Schirmer and Pickworth 2005ab for example survey questions)
Family and friends	<ul style="list-style-type: none"> • frequency of interaction with family and friends • physical distance from family and friends • proportion of family and friends who are also members of same fishing community.
Fishing activities	<ul style="list-style-type: none"> • membership of fishing organisations and level of involvement in organisations • level and types of interactions between those in fishing communities • institutions, networks and processes used to acquire skills in fishing.
Links between fishing communities and broader community	<ul style="list-style-type: none"> • involvement of members of fishing community in various types of civic/ community organisations, eg sporting, cultural, school, neighbourhood, religious, and/or emergency services groups • formal and informal services available in local regions, eg education services, health services, financial services, legal services. These may be measured by studying the distance that has to be travelled to access each service. • level of attachment to region in which people live, and their rating of satisfaction with the area and community as a place to live • level of interaction between fishing community and general community • perceptions of relations between fishing communities and the general community.

Values, attitudes and beliefs

What types of data are collected and analysed?

The measurements of values, attitudes and beliefs can include:

- studying the values, attitudes and beliefs of the fishing community
- studying the values, attitudes and beliefs of the general community about the fishing sector.

The study of values, attitudes and beliefs is perhaps less common in social assessment than the study of other dimensions such as social profiles of relevant communities, or measures of quality of life.

Why is this useful?

Studying values, attitudes and beliefs is an essential part of understanding the cultures related to particular fishing activities, and is particularly important in helping identify social goals of importance to different communities. Understanding the social goals of a community is essential to assessing its quality of life, as it pinpoints the issues of importance to that community.

Useful measures and indicators

Surveys of values, attitudes and beliefs can examine a very wide range of topics. This type of work should start with identifying the types of values, attitudes and beliefs relevant to the study, and then designing appropriate questions around these.

What methods can be used?

Generally there are few if any regularly collected sources of information on the values, attitudes and beliefs of fishing and non-fishing communities. Therefore quantitative and qualitative surveys are used to gather this type of information (eg Aslin and Byron 2003).

Spatial relationships linking aquatic resources and fishing communities

What types of data are collected and analysed?

This type of assessment examines the spatial relationship between aquatic resources and human communities dependent on or linked to that resource, and the spatial variation in socioeconomic characteristics of human communities linked to fishing.

The spatial patterns examined may be related to any of the social data discussed above – for example, the spatial distribution of:

- populations undertaking fishing-related activities over time
- the current population undertaking fishing-related activities linked to a particular aquatic resource
- location and level of different fishing activities undertaken by people linked to a particular aquatic resource
- differences in the socio-demographics, wellbeing and social capital within/between fishing communities linked to a particular aquatic resource
- differences in values, attitudes and world views of different communities linked to a particular aquatic resource.

Why is this useful?

It is important to understand the spatial distribution of human communities and activities in relation to an aquatic resource. This helps to identify the different communities that are dependent on particular aquatic resources, particularly where they are not located geographically adjacent to the aquatic resource being used. Recognition of the spatial differences in social conditions within and between fishing communities is essential to understanding the potential implications of particular actions or changes to fishing-related activities.

What methods can be used?

Identifying the spatial distribution of particular characteristics of fishing populations and activities may occur through:

- Analysing existing secondary data if it is available as spatial data. It is important to check the scale for which data is available, and whether the spatial scale is small enough to provide appropriate information about spatial distribution of populations or activities.
- When undertaking qualitative or quantitative surveys, ensuring that respondents are asked to specify the location in which relevant activities/populations occur. This then allows analysis of survey results by spatial location.
- Town Resource Cluster analysis, a specific technique developed to analyse the spatial location of fishing communities in relation to the aquatic resources they are dependent on (see Fenton and Marshall 2001).

It is important to examine the spatial distribution of human communities in relation to the aquatic resources they use for fishing.

Data collection methods



- ▶ Accessing and analysing data
- ▶ Qualitative secondary data
- ▶ Quantitative secondary data
- ▶ Collection and analysis of primary data
- ▶ Key challenges faced when collecting primary data
- ▶ Qualitative surveys
- ▶ Quantitative surveys

Data collection methods

Data collection methods

Qualitative secondary data

- Reports, publications
- Media articles
- Government documents



Quantitative secondary data

- Existing sets of social statistics produced by previous surveys and data collection



Qualitative primary data

- Focus groups/ workshops
- Individual interviews—structured, semi-structured or unstructured



Quantitative primary data

- Mail surveys
- Phone surveys
- Face-to-face surveys



A range of methods can be used to collect data as part of a social assessment. Different methods require different levels of funding and time. Different data collection methods are reviewed briefly below, focusing on the types of data collected, advantages and limitations, likely cost and time required.

The table on the next page summarises key characteristics of different data collection methods. In the table:

- The *Advantages and limitations* column lists some key issues that should be taken into consideration when using this method.
- *Likely cost* gives a cost rating based on low (\$), medium (\$\$), or high (\$\$\$) cost.
- *Time required* is based on rapid (< 6 weeks), medium (6–12 weeks), or high (>12 weeks) time required for that particular type of data to be collected and analysed. The time estimates are based on how long the data collection and analysis would take assuming full-time resources were committed to completing the assessment as fast as possible. In many cases, the actual time taken would be much longer – for example, if the researcher/s undertaking the study were not working full-time on the study, or if a number of different types of data were to be collected and analysed simultaneously. The estimate includes time for planning the data collection, collecting data, and analysis and reporting of results.
- *Validity* of data collected refers to the accuracy of the data. Specifically, it refers to whether the data collected is likely to answer the questions it was intended to answer, or measure what it was intended to measure.
- *Reliability* of data collected refers to whether the same results are likely to be achieved if the data collection process is repeated.

Overview of different data collection methods

Data collection method	Advantages/ limitations	Likely cost	Time required	Validity	Reliability
Analysis of existing literature	<ul style="list-style-type: none"> Can provide useful historical data. Care is needed in re-analysing reports produced for a specific purpose. 	\$	Low to medium – accessibility of literature varies	Low to high	Low to medium
Analysis of secondary data sets	<ul style="list-style-type: none"> Secondary data do not always exist. Access to secondary data varies depending on who gathered the data and for what purposes. Data may not be in a form useful for a social assessment. 	\$ to \$\$	Low to medium	Depends on type of data, how it was collected, and how it is used	Depends on how data has been collected
Qualitative survey – focus groups/ workshops	<ul style="list-style-type: none"> Data can help explain current/historical social conditions. Can identify social issues relevant to a particular community. Usually cannot provide quantitative data on social conditions. Can be difficult to assess representativeness of participants. Some people are uncomfortable communicating in this setting. 	\$ to \$\$	Low	Medium to high depending on how questions are discussed and information is recorded	Medium
Qualitative surveys – individual interviews	<ul style="list-style-type: none"> Data can help explain current/historical social conditions. Can identify social issues relevant to a particular community. Usually cannot provide quantitative data on social conditions. Can be difficult to assess representativeness of participants. 	\$ to \$\$\$ depending on number interviewed	Low to high depending on number interviewed	High	Medium
Quantitative survey (mail, phone, or face-to-face)	<ul style="list-style-type: none"> Can gather data to answer specific questions of interest. Can gather a wide range of social data in a single survey. Data gathered is descriptive and cannot explain how or why particular social conditions have come about. Can be difficult to achieve a high response rate. Minimum sample size required for appropriate statistical analysis will vary depending on the size of the population surveyed, but can be quite high – leading to higher expense. Can be difficult to identify and contact survey respondents. 	Mail: \$ Phone: \$\$ to \$\$\$ Face-to-face: \$\$\$	Medium to high for all survey methods Mail survey often requires longer time frame than phone or face-to-face survey	Depends on survey design and response rate	Depends on survey design and response rate

Sometimes existing literature can be re-analysed as part of a social assessment.

Accessing and analysing secondary data

In many cases, secondary data can be accessed to provide information for a social assessment. Secondary data analysis refers to:

Any further analysis of an existing dataset which presents interpretations, conclusions, or knowledge additional to, or different from, those presented in the first report on the data collection and its results (Marshall 1998).

The datasets reviewed may be:

- existing qualitative literature, such as reports, reviews, and other documents
- existing quantitative literature, such as sets of publicly available statistics.

Qualitative secondary data

A wide range of qualitative literature may already exist about the fishing or general communities being studied as part of a social assessment. This may include reports of previous research, government and industry documents relevant to the assessment, or media reports about the community.

Sometimes this literature can be re-analysed to provide information relevant to the social assessment. This is a common approach used to study the history of a fishing community or region.

When considering analysing existing literature, key questions to ask include:

- Is existing literature relevant to the social assessment?
- What limitations and constraints are there to using the data?

Existing literature may not be applicable to the social assessment because it was gathered for a different purpose. Care should be taken not to over-generalise from previous studies, and to examine the limitations of the literature.

Where it is relevant and applicable, the use of existing literature can be a cost and time-effective source of information, and can reduce the amount of time fishing communities are asked to invest in participating in research processes.

Quantitative secondary data

A number of different organisations undertake regular quantitative surveys of Australian communities, gathering a range of types of social data. The data collected are made available by some of these organisations for purchase or as freely accessible datasets.

Examples of data collected on a regular basis, which can be accessed and analysed to provide input to a social assessment, include:

- A wide range of Australian Bureau of Statistics data sets, including data from the 5-yearly *Census of Population and Housing*, the regular *Labour Force Survey*, and a range of other surveys and data collections.
- Catch and effort data collected about commercial fisheries by fisheries management agencies.
- A range of other surveys carried out on a regular or semi-regular basis in particular regions and on particular topics. It is useful to explore whether regional development organisations, local government, local fishing industry associations or other organisations collect any data relevant to social assessment of fishing communities.

In addition, it may be possible to access data from 'one-off' surveys and studies which collected information relevant to the fishing communities being studied. This data may not be as useful as time-series data (ie data collected in a comparable way over time) but should be used where possible to avoid repeating data collection that has already occurred.

It may also be possible to create time-series data by repeating a survey undertaken some time ago to identify changes that have occurred since the original survey was carried out.

Care needs to be taken in accessing and analysing secondary data. In particular, you should:

- Assess the quality of the data in terms of both reliability and validity. Examine the sample size from which data was collected, and the processes used for ensuring accuracy of the data.
- Assess whether the available data tells you anything useful about the fishing community you want to study. It can be tempting to use or include data simply because it exists. However, not all existing data will be useful.
- Assess the level of analysis required to transform secondary data into information useful for your social assessment. Often secondary data require considerable analysis and transformation to provide useful data for an assessment.

A number of different organisations undertake regular surveys of Australian communities.

In many cases, data will need to be collected specifically for a social assessment.

Collection and analysis of primary data

In many cases, the information needed for a social assessment is not available in secondary data sets. Where this is the case, primary data will need to be collected. Primary data simply means data collected specifically for the social assessment, usually being collected for the first time.

Various types of primary data may be collected. In general, they fall into the categories of 'qualitative' and 'quantitative' data, although the distinction between the two is not always clear-cut.

Qualitative data generally refers to data that is not able to be statistically quantified, or that is non-numeric in nature:

Qualitative data often consists of words describing an experience or impression – for example, a participant's impression about the fairness of a program... and emphasises the use of descriptions and categories (The Synergy Project, n.d.)

This might include data describing the history of a region, or the attitudes, feelings and motivations of people in a community. Qualitative data cannot usually be used to make inferences about an entire population.

Quantitative data refers to numeric information describing particular characteristics of a population, usually obtained by measuring characteristics or events in a systematic, numeric manner. Quantitative data is presented as numbers – for example, the total number or percentage of a particular population over a particular age. If data is collected from an appropriate proportion of a population, quantitative data may be used to make inferences about the entire population.

The collection of both qualitative and quantitative data may be a useful part of a social assessment. Quantitative data is useful for *numerically describing* and *quantifying* social characteristics of particular communities. Qualitative data, on the other hand, is useful for *explaining* the potential causes and consequences of trends observed in quantitative data, and for describing *non-numeric* characteristics of communities.

Key challenges faced when collecting primary data

Collecting primary data is often difficult. While it is possible to design good methods for collecting data (discussed below) it is not always so easy to convince members of fishing communities to provide data.

To increase survey response rates and participation in a study, it is useful to:

- find out if any other data requests are being made of fishing communities, and where feasible combine data collection across different projects
- obtain support from key fishing representative groups, and ensure that members of the community being surveyed know that the social assessment is supported by these groups
- carefully analyse the data requirements for your assessment, and do not request more data than is necessary
- design surveys and workshops to fit in with the schedules of the people being surveyed, ensuring they are not being unduly inconvenienced by requests to provide data.

Qualitative surveys

Qualitative data is generally gathered through discussions with a group of people or with individuals. Qualitative surveys may ask *structured*, *semi-structured* or *unstructured* questions. This classification simply refers to the level of restrictiveness in how respondents can answer questions. Structured questions may require respondents to give a 'yes/no' or brief answer, while unstructured and semi-structured questions may ask respondents to provide a broad-ranging discussion about a particular topic.

Focus groups and workshops

Qualitative data is often collected via focus groups or workshops, in which a group of people are asked to answer or 'workshop' a particular set of questions. The participants might be randomly selected members of a particular fishing or non-fishing community, or be selected for their specific knowledge of a particular topic or community.

Focus groups or workshops are useful to gather the following types of data:

- historical information about a community or region
- identification and description of key social issues facing a community
- potential explanations for trends observed in quantitative surveys.

When planning a focus group or workshop, questions to be answered include:

- Who should be involved in the workshop? Is it more appropriate to invite 'key informants' with recognised knowledge of a particular issue or community, or to randomly select members of a community?
- Can the information required be gathered in a workshop/focus group setting? If the questions asked are on sensitive topics, such as financial or health issues, people may be reluctant to provide information in a group setting. In these situations, conducting individual interviews may be a more suitable approach to gathering information.

Individual interviews

Qualitative data may be collected by conducting interviews with individuals. This can be time consuming, but often allows collection of detailed data that may not be provided in a less confidential setting. For example, when collecting historical information, more detailed information may be gathered via individual interviews in which a person is able to present their individual perspective without interruption, than in a group setting where time is more limited and there may be a tendency for some people to dominate the discussion.

Quantitative surveys

Quantitative surveys usually ask a series of structured questions, which may be closed or open-ended. Closed questions are questions where respondents must choose from a pre-defined set of responses (eg 'yes', 'no' or 'don't know'). Open-ended questions are questions where respondents are given space to provide any answer they choose (eg 'list the key management changes that have occurred in this fishery in recent years').

The questions asked may be about any aspects of a fishing community or region, including questions related to social profiles, quality of life, social capital, or values, attitudes and beliefs.

Quantitative surveys may be conducted by mail, phone, or face-to-face. The benefits and limitations of each method are discussed below.

Mail surveys

Mail surveys involve sending a printed questionnaire to the addresses of a pre-determined sample of people, and asking them to complete and return the survey in a pre-paid envelope sent together with the survey.

Mail surveys are perhaps the cheapest method of surveying a community, as they involve less labour time than asking questions by phone, or face-to-face.

However, mail surveys take more time than other types of survey. At least four to six weeks are needed between sending the survey and receiving responses.

Low response rates to mail surveys are common. Sending 'reminder cards' is a useful way of increasing response rates.

Mail surveys must be carefully designed and tested to ensure that they ask easily-understood questions, and that respondents interpret the questions in the way intended by the people who have designed the survey. It is best to design a survey using close consultation with a small group of potential respondents, as well as to conduct a full test of the survey on a small group of respondents.

Where survey questions require respondents to examine financial or other personal records, it is useful to use mail surveys rather than phone or face-to-face surveys. If asking for information that may be held by more than one member of a household, it is similarly recommended that mail survey be used.

Phone surveys

Phone surveys involve calling a pre-determined sample of people, and requesting they answer a series of questions over the phone.

Phone surveys can be implemented more rapidly than mail surveys. They are more expensive than mail surveys as they require considerable labour. Repeated calls may be necessary before contact is made with individuals in the sample, particularly in the case of commercial fishers who often have irregular hours of availability. Phone surveys should only ask questions which can be answered easily by phone without reference to particular documents.

Face-to-face surveys

Face-to-face surveys involve directly meeting with individuals, and going through a set of survey questions with them. This allows surveys to be conducted in a wide range of settings such as in people's homes; at places where fishing is undertaken, catch is landed or boats are moored; or at fish processing facilities. This is a useful approach in situations where it is difficult to obtain phone numbers or addresses of the people who are being surveyed.

Face-to-face surveys are time consuming and more expensive than other quantitative survey options. They do allow for the surveyors to work through survey questions with respondents, and this can increase the validity of responses received.

Using results of social assessments

- Social assessment of a community at a single point in time
- Assessment of social conditions over time
- Predicting potential impacts of a proposed change

Using results of social assessments

The results of social assessments are commonly used:

- to obtain a 'snapshot' of social conditions associated with particular fishing activities at a single point in time
- to monitor and evaluate changes in social conditions over time (if regular assessments are undertaken)
- as the starting point for predicting the potential impacts of a proposed change.

Social assessment of a community at a single point in time

Information about a fishing community at a particular point in time can be used to:

- help understand how fishing-related activities are contributing socially to a region
- examine the wellbeing of fishing communities in relation to the general community at that point in time
- identify social challenges and opportunities for fishing communities.

Assessment of social conditions over time

Information about social conditions over time can be used in the same ways as assessment at a single point in time, but can also:

- show trends and changes over time, allowing identification of where social conditions are improving and where they are worsening
- be used to analyse the impacts of changes affecting fishing activities, eg the impact of regulatory changes or market shifts on social conditions.

Predicting potential impacts of a proposed change

Results of social assessments are commonly used as the starting point for predicting and evaluating the potential costs and benefits of a proposed change – in other words, undertaking a predictive social impact assessment (SIA). A SIA may be undertaken when any of a wide range of changes to fishing activities or communities is being considered – for example, when considering the potential impacts of resource re-allocation or changes to the regulation of a fishery.

Predicting the potential impacts of a proposed change requires a thorough understanding of current and historical social trends and structures of the communities that may be impacted by the change.

A social assessment represents the first steps of an SIA. Once the social assessment phase is completed, a predictive SIA will usually undertake some or all of the following:

- Analyse the results of the social assessment to gain a clear idea of the constraints and issues facing fishing communities
- Identify which fishing communities would potentially be impacted by the proposed change and the types of impact
- Develop *scenarios* of potential impact. These scenarios represent different predictions of how the proposed change might affect fishing communities, and may include 'worst case', 'best case' and 'middle case' scenarios about the potential impacts. Scenario development allows a range of different responses to be analysed and understood, and helps identify the range of possible impacts a proposed change may have
- Analyse the costs and benefits of the proposed change under each scenario
- Develop mitigation strategies that address negative impacts predicted in the different scenarios
- Monitor and evaluate the actual impacts of the proposed change, developing further mitigation strategies if and as needed.

Evaluating social assessment proposals and reports & further reading

- Evaluating a proposal
- Evaluating results of a social assessment
- Further reading



Evaluating social assessment proposals and reports

Evaluating proposals to undertake social assessments, or results of a social assessment, requires an appropriate level of knowledge about social assessment. The information in this handbook will help guide evaluation of the quality of proposals, and of the results and reports produced from social assessments.

The following checklist has been designed to assist in evaluations of proposals for, and results of, social assessments.

Evaluating a proposal

Does the proposal:

- Clearly define the key questions, scope and goals of the assessment? ☐
- Clearly define the process to be used in the assessment? ☐
- Include a plan for participation of key groups and stakeholders? ☐
- Define types of data needed to meet the goals of the assessment? ☐
- Outline methods to be used to gather the data? ☐
- Include a strategy for communicating results of the assessment to key groups and stakeholders? ☐
- Have a realistic and cost-effective budget, given the scale and scope of information to be gathered and analysed? ☐

Evaluating results of a social assessment

Did the social assessment:

- Address the key questions, scope and goals set at the start of the assessment? ☐
- Use an appropriate process with adequate levels of participation? ☐
- Gather appropriate types of data? ☐
- Use appropriate methods to gather data? ☐
- Clearly document the methods and processes used, to allow others to repeat the study in future if needed? ☐
- Clearly report the limitations of the assessment? ☐

References and further reading

On social assessment and social impact assessment:

Becker HA and Vanclay F (eds) (2003). *The International Handbook of Social Impact Assessment: Conceptual and Methodological Advances*. Edward Elgar Publishing Ltd, Cheltenham, United Kingdom.

Coakes S (1999). *Consulting Communities: a Policy Maker's Guide to Consulting With Communities and Interest Groups*. Bureau of Rural Sciences, Canberra.

Coakes S (1999). *Social Impact Assessment: a Policy Maker's Guide to Developing Social Impact Assessment Programs*. Bureau of Rural Sciences, Canberra.

Taylor CN, Bryan CH and Goodrich CG (1995). *Social Assessment: theory, process and techniques*. Taylor Baines and Associates, Christchurch.

USA Government Services Administration (1998). *Social Impact Assessment*. National Environmental Policy Division, Washington D.C.

Vanclay F (2003). *Social Impact Assessment: International Principles*. IAIA Special Publications Series No. 2, May 2003. International Association for Impact Assessment.
<http://www.iaia.org/Members/Publications/Guidelines_Principles/SP2.pdf>

On ecologically sustainable development for the Australian fishing sector:

Commonwealth of Australia (1992). *The National Strategy for Ecologically Sustainable Development*. AGPS, Canberra. <<http://www.ea.gov.au>>

Ecologically Sustainable Development Subprogram of the Fisheries Research and Development Corporation. A range of publications and information are accessible at <<http://www.fisheries-esd.com/c/home/index.cfm>>

Social assessments undertaken in the Australian fishing sector:

Aslin HJ, Connor RD and Fisher M (2001). *Sharing in the catch or cashing in the share? Social impacts of Individual Transferable Quotas and the South East Fishery*. Bureau of Rural Sciences and Centre for Resource and Environmental Studies, Australian National University, Canberra.

Aslin HJ and Byron IG (2003). *Community perceptions of fishing: implications for industry image, marketing and sustainability*. Fisheries Research and Development Corporation Project No. 2001/309. FRDC, Canberra.

Bradshaw M, Wood L and Williamson S (2001). Applying qualitative and quantitative research: a social impact assessment of a fishery. *Applied Geography* 21: 69–85.

Coakes S, Gabriel M, Brooks K and Charalambou C (2001). *The right bait – social contributions of tourism fishing charter operations to St Helens, Tasmania*. Social Sciences Centre, Bureau of Rural Sciences, Canberra.

Fenton DM and Marshall NA (2001). *A Guide to the fishers of Queensland*, parts A, B and C. CRC Reef Technical Reports 36, 37, 38.
<<http://www.reef.crc.org.au/publications/techreport/index.html>>

Henry, GW and Lyle, JM (eds) (2003). *The National Recreational and Indigenous Fishing Survey*. FRDC Project No, 99/158. Australian Government Department of Agriculture, Fisheries and Forestry, Canberra. Available online at <<http://www.affa.gov.au/recfishsurvey>>

Huddleston V and Drew N (2003). *The assessment of prospective changes to social infrastructure as the result of rock lobster industry management initiatives*. Institute for Regional Development, Western Australia.

Larcombe J, Brooks, K, Charalambou, C, Fenton, M, Fisher, M, Kinloch, M. and Summerson, R. (2002). *Marine matters: Atlas of marine activities and coastal communities in Australia's South-East Marine Region*. Bureau of Rural Sciences, Canberra.

Minnegal, M., King, T.J., Just, R., and Dwyer, P. (2003). Deep identity, shallow time: sustaining a future in Victorian fishing communities. *The Australian Journal of Anthropology* 14: 53–71.

Schirmer J and Pickworth, J. (2005a). *A social assessment of the Marine Scalefish Fishery of South Australia*. Case study report for FRDC Project 2003/056 A social assessment handbook for use by Australian fisheries managers in ESD assessment and monitoring. Bureau of Rural Sciences, Canberra.

Schirmer J and Pickworth, J. (2005b). *A social assessment of the contributions of commercial fishing to the Gippsland Lakes region of Victoria*. Case study report for FRDC Project 2003/056 A social assessment handbook for use by Australian fisheries managers in ESD assessment and monitoring. Bureau of Rural Sciences, Canberra.

Other references

Marshall, G, ed, (1998). *Oxford Dictionary of Sociology*. Oxford University Press, Oxford.

NSW Health (n.d.). Health promotion glossary. <<http://www.health.nsw.gov.au/public-health/health-promotion/abouthp/glossary.html>>

Office of the Voluntary Sector (2003). *Partnership with the Voluntary Sector: Glossary of Terms*. Public Health Agency of Canada, Ottawa. <<http://www.phac-aspc.gc.ca/vs-sb/voluntarysector/glossary.html>>

The Synergy Project (n.d.) APDIME Toolkit Version 2.0 Glossary <<http://www.synergyaids.com/apdime/reference/Glossary%20Master.PDF>>