

Offshore impacts to fisheries

Practitioner guidance for social baselines

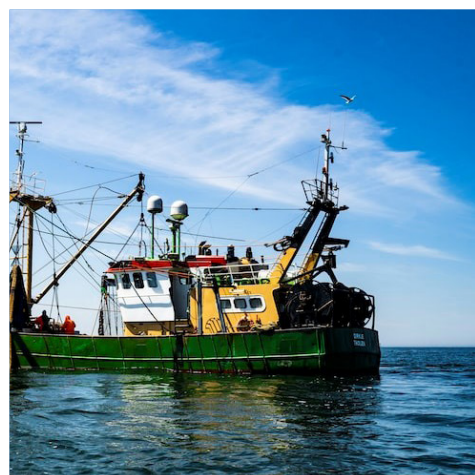
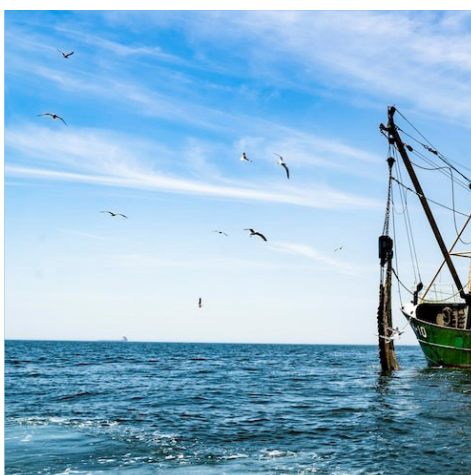


Social
Responsibility



Advancing environmental
and social performance
across the energy transition

www.ipieca.org



© Ipieca 2023 All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior consent of Ipieca.

This publication has been developed to support the implementation of Ipieca's mission and vision. While every effort has been made to ensure the accuracy of the information, it is intended to provide general guidance only. It is not designed to provide legal or other advice, nor should it be relied upon as a substitute for appropriate technical expertise or professional advice. All attempts have been made to ensure that the information is correct at the date of publication. This publication does not constitute a mandatory commitment which members of Ipieca are obliged to adopt. The views and conclusions expressed herein do not necessarily reflect the views of all Ipieca members or the individuals, companies and institutions that contributed to this publication.

While reasonable precautions have been taken to ensure that the information contained in this publication is accurate and timely, this publication is distributed without warranty of any kind, express or implied. Ipieca neither endorses nor accepts responsibility for the content or availability of any website referred to, or linked to, in this publication. The responsibility for the interpretation and use of this publication lies with the user and in no event will Ipieca or any of its members past, present or future, regardless of their negligence, assume liability for any foreseeable or unforeseeable use made thereof, which liability is hereby excluded. Consequently, such use is at the recipient's own risk on the basis that any use by the recipient constitutes agreement to the terms of this disclaimer. This disclaimer should be construed in accordance with English law.

Acknowledgments

The text for this guide was prepared by Louis Penny and Sabrina Genter (ERM). The expertise, advice and additional input from all who contributed to this document through the review process established under the Ipieca Community Engagements and Indigenous Peoples Task Force are also gratefully acknowledged.

Offshore impacts to fisheries

Practitioner guidance for social baselines



The global oil and gas association for advancing environmental and social performance across the energy transition

14th Floor, City Tower, 40 Basinghall Street, London EC2V 5DE, United Kingdom

Telephone: +44 (0)20 7633 2388 E-mail: info@ipieca.org Website: www.ipieca.org

Contents

Introduction	3	Section 4: Tips and advice	34
Section 1: Overview	4	Section 5: Case studies	37
Using this guidance	5	Case study 1	38
Offshore project impacts	6	<i>Oil and gas company – seismic surveys, Europe</i>	
Defining fisheries	7	Case study 2	39
		<i>Oil and gas company – fibre optic cable, South America</i>	
Section 2: Overview of baseline data	8	Case study 3	40
Baseline indicators	12	<i>Oil and gas company – fisheries study, Asia</i>	
Human/cultural – fisheries/fishing activities	14	Case study 4	41
Human/cultural – economic	17	<i>Renewables developer – offshore wind farm, Asia</i>	
Human/cultural – livelihoods	19	Case study 5	42
Physical and biological environment	22	<i>Mining company – fisheries study, Oceania</i>	
Section 3: Data collection techniques and tools	23	Case study 6	43
Literature reviews	27	<i>Oil and gas company – fisheries management programme, Asia</i>	
Stakeholder interviews	28		
Stakeholder surveys/questionnaires	30		
Registration and licensing	31		
Direct data sources/observations	32		
Reporting	33		

Introduction

A RECOGNIZED OPPORTUNITY FOR PRACTITIONERS

Ipieca recognizes that there is an opportunity to support practitioners to develop robust social baselines for offshore projects.

Having a well-designed social baseline serves to shape the outcomes of offshore projects. In particular, it helps to enhance benefits for, and avoid or mitigate impacts to, fisheries and fishing communities.

Ensuring the quality of social baselines, in particular as it relates to fisheries, requires an understanding of a variety of factors. These factors may include, but are not limited to:

- The nature of the offshore project and its associated activities
- The geographic location of the project, including proximity to fisheries and fishing communities
- The data collection techniques/tools suitable for the local context
- The time or resources required to develop and maintain the baseline

In addition, a social baseline provides a starting point to understand potential interactions with, and impacts to, fisheries and fishing communities. The process of collecting data can also serve as a vehicle for engagement through which positive working relationships with stakeholders can be formed, such as with representatives from fisheries and fishing communities.

Accordingly, this guidance seeks to support practitioners to make informed decisions when it comes to designing and implementing social baseline data collection processes.

PURPOSE OF THIS GUIDANCE

It is not intended that this guidance explain what a social baseline is or why it is important to properly characterize impacts, but rather it is to be used to enhance consistency in social baselines. More specifically, to support practitioners in selecting the right data collection tools at the appropriate stage in the project life cycle to inform better outcomes for both communities and proponents.

Accordingly, this guidance is designed to help practitioners develop social baselines that:

- Suitably characterize impacts to fisheries and associated stakeholders
- Can be scaled to suit a variety of different offshore contexts and projects
- Will stand up to institutional scrutiny
- Reduce delays associated with the collection of incorrect data
- Support efforts to avoid and/or minimize impacts on fisheries and associated communities

Overview

This section identifies how and when to use this guidance and provides an introduction to offshore project impacts and fisheries.



Using this guidance

WHAT IS INCLUDED?

This guidance has been designed to support practitioners in developing robust social baselines. Users are directed to leverage the sections of this guidance as relevant to their circumstances:

- **Section 2** identifies the key indicators for social baseline assessments as they relate to the fisheries industry.
- **Section 3** identifies the various techniques/tools that can be used to prepare a suitable social baseline that characterizes and analyses social receptors.
- **Section 4** provides additional advice not already captured in other sections to help practitioners in preparing social baselines, as identified by Ipieca members and experienced practitioners.
- **Section 5** provides a suite of case studies drawn from a range of offshore projects in order to demonstrate that the development of a robust and appropriate social baseline is possible in varying geographic contexts.

TARGET AUDIENCE

This guidance has been designed for the following users:

- **All companies undertaking current/future offshore activities:** this guidance is not meant for only existing oil and gas project operators and/or operations, but should be used to guide future activities associated with the energy transition, and help companies to respond to the variability in local regulatory requirements as it relates to fisheries impacts in different countries around the world.
- **Practitioners:** this guidance is intended to be used by practitioners within companies undertaking offshore projects looking to understand the potential risks and impacts associated with social baselines.

WHEN TO USE THIS GUIDANCE?

This guidance is intended to be used by practitioners whenever they need to develop and/or update the social baseline for a project and/or project activity.

Accordingly, the use of this guidance should align with the circular nature of data collection.

It is important for practitioners to remember that while a social baseline does not change, baseline conditions will change, and therefore the baseline will require continued updating to account for feedback received, and the incorporation of new information and changing circumstances.

Figure 1: Circular nature of data collection



Offshore project impacts

DEFINING OFFSHORE PROJECTS

For the purpose of this guidance, offshore projects are defined as projects comprising oil and gas exploration and development, renewable energy (i.e. floating wind/solar farms), carbon capture and storage, and/or subsea pipelines.

Offshore project impacts have been considered through the lens of planned and unplanned events.

CUMULATIVE IMPACTS



Offshore project impacts to fisheries do not occur in isolation from one another and will often interact. This interaction has the potential to exacerbate the overall impact on fishers in either a positive or negative manner.



OFFSHORE PROJECT IMPACTS EXPERIENCED BY FISHERS AND LOCAL COMMUNITIES MAY BE POSITIVE OR NEGATIVE, AND CAN INCLUDE:

- Temporary or permanent removal and/or disruption to fish aggregating devices may reduce catch rates/quantities
- Investment in offshore projects may help to support local fisheries-based economies
- Temporary vessels may be used to support local development initiatives
- Turbines, piles, pipelines, and other structures may have beneficial impacts on habitats and fish communities
- Alteration of fish spawning, rearing, and/or migratory areas can occur
- Increased health and safety risks to fishers (higher risks of collisions)
- Environmental impacts on fish resources (e.g. waste discharge, increased water turbidity, alteration of waterways, etc.) can displace fish and reduce catch yields
- Noise emissions, light spill, and increased shipping traffic can displace fish or fish aggregating devices
- Enforcement of exclusion zones can limit the ability for local fishers to access traditional locations
- Physical displacement (temporary or permanent) of fishing communities
- Long-term impact on food security and sustainable use of natural resources as fish catch changes
- Increased risk of damaging fishing equipment (e.g. lines, nets, pots, etc.)
- Indirect and unintentional impacts from economic investment may ultimately lead to a loss of livelihoods in the fisheries industry

Defining fisheries

The term 'fisheries' in this guidance is defined as an area where fish are caught for commercial and/or subsistence purposes. Typically this area is agreed upon by countries and fishers, and is defined by characteristics such as the people involved, the species or types of fish, the area of water/seabed, the methods of fishing, the class of boats used, and/or the purpose of the activities.

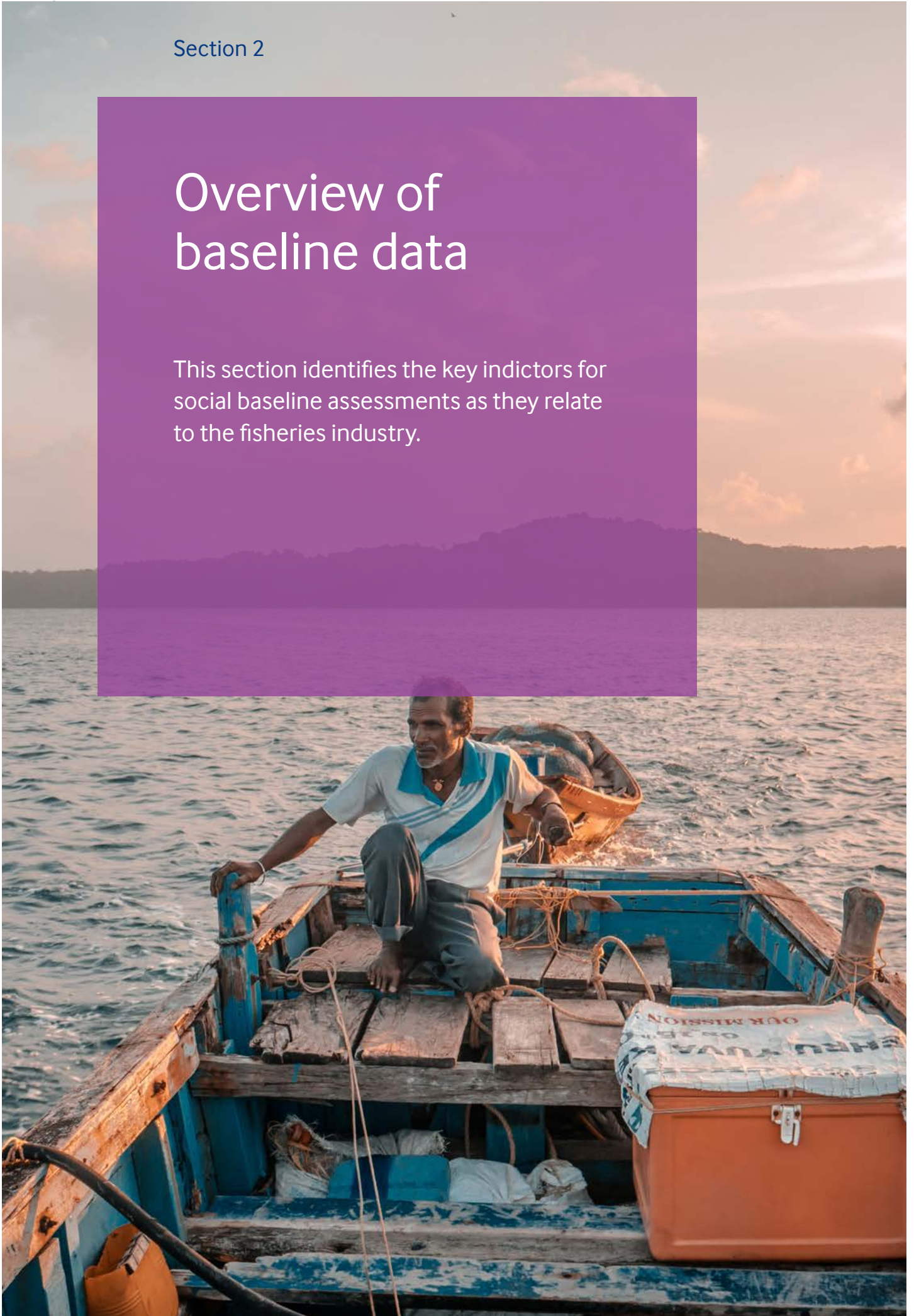
There are different types of fisheries, however, fisheries may also be a combination of types (e.g. subsistence fishers may utilize traditional practices). All of the following fisheries are considered in this guidance:

- **Industrial fisheries:** larger-scale operations that often use bigger vessels and/or fleets in order to drive a higher rate of production/catch yields. Generally, industrial fisheries implement more advanced technological methods in their operations.
- **Small-scale/artisanal fisheries:** smaller operations typically run by fishing households. Artisanal fisheries rely on the use of smaller vessels and crews, often making numerous runs close to the shoreline. Whilst fishing practices vary globally, these types of fisheries may be reliant on more labour-intensive forms of collection.
- **Commercial fisheries:** fisheries which are run purely for profit with the primary objective to sell onward to domestic and/or international markets. It should be noted that whilst commercial fisheries may be international, they will also have local connections (e.g. local crews, owners, etc.).
- **Aquaculture:** involves the farming of aquatic organisms that involves intervention within the rearing process to enhance production outcomes. This is contrasted with commercial fisheries that are based on wild catch.
- **Subsistence fisheries:** fisheries run purely to service the fishing household, with no onward sale to markets.
- **Traditional fisheries:** fisheries with rules and operations guided by cultural customs and/or religious practices.
- **Recreational fisheries:** fisheries run for the purpose of leisure. There is no sale of product to markets.



Overview of baseline data

This section identifies the key indicators for social baseline assessments as they relate to the fisheries industry.



Overview of baseline data

SOCIAL BASELINE DATA COLLECTION

A social baseline can be leveraged not only to inform a social impact assessment, but also the programmes and strategies that contribute to a company's social licence to operate. In particular, a social baseline can be used to inform compensation, and in the case of financial compensation, underpin payment calculations.

A prior scoping exercise is crucial, as it will determine the area of influence for the project, and thereby allow

baseline data collection to be tailored to ensure that it not only advises direct and indirect impact quantification, but also informs potential cumulative impacts.

Therefore, **baseline data collection should focus on data through the lens of the full project life cycle**, as the needs of a project will change as it moves through concept design, detailed design and construction, operations, and decommissioning/closure.

Figure 2: Leveraging the social baseline



BASELINE SCOPING: PROJECT CONTEXT

Before baseline data is collected, practitioners should undertake a scoping exercise. This exercise will identify the various sensitive receptors (e.g. fisheries and fishing communities) that may be impacted by project activities, as well as the potential impacts that may be experienced by the identified sensitive receptors.

The scoping exercise should consider the project context, which comprises a range of factors that will influence the type of baseline data required and the techniques and tools used for data collection. These factors include:

- **Nature/type:** the nature or type of activity or activities that are to be carried out will be important to understand as this will influence the likely impacts on fishers or fishing communities. For instance, activities associated with conducting a seismic survey will differ from those associated with the laying of an offshore fibre optic cable.
- **Scale:** the scale of the project and/or project activity will inform the level of detail required in the baseline. Larger-scale projects tend to require a more extensive social baseline as they need to consider a greater number of variables, than those for smaller-scale projects.
- **Duration:** the proposed duration of the project or project activities will need to be understood as this will inform whether associated impacts to fishers or fishing communities are likely to be temporal or permanent, and whether there will be overlap between the project activities and identified fishing seasons.
- **Location:** the location of the project or project activities typically has an influence on the availability of baseline data, and/or provides practitioners with an understanding of which prospective sources of baseline data to target.

BASELINE SCOPING: PROJECT LIFE CYCLE

Understanding where the project and/or project activities sit in relation to the wider project life cycle is important in order to discern the specific requirements for the baseline data, as well as plan for future baseline data collection initiatives.

The project life cycle may vary based on the type of offshore project being undertaken, but typically will comprise the following stages:



Concept design: this is the initial stage of a project, where project parameters are not yet fully defined. Activities are required to be carried out in order to inform more detailed planning and development. The social baseline needs in this stage are likely to be relevant to collecting data to inform initial studies (e.g. drilling tests) or survey activities (e.g. seismic surveys).



Detailed design and construction: this stage is typically when most impacts are experienced, as the project proceeds through detailed design and construction, and installation commences. A social baseline developed at this stage needs to be sufficiently detailed so as to ensure impacts to fishers and fishing communities are appropriately avoided, minimized, or mitigated, and where this is not possible, compensated.



Operations: whilst some impacts to fishers and/or fishing communities may be temporary during construction, impacts experienced during operations will typically have a longer duration. Social baselines developed during this stage should consider prior activities undertaken.



Decommissioning: this stage includes the completion of project operations and closure. Baseline data collected to inform project impacts during this stage will need to consider information obtained throughout the project operation, as well as inform future outcomes for fishers and fishing communities, particularly if operations have had a substantive impact on the local community.

TIP: It is important to consider that as much as a social baseline is influenced by a project and/or project activities, the project and/or project activities should also be influenced by the social baseline – particularly in relation to the timing and location of activities.



BASELINE SCOPING: DEFINING THE AREA OF INFLUENCE

Through the scoping exercise the project and/or project activity's **area of influence** should be determined. This is the area within which potential impacts are likely to be experienced. Determination of the area of influence is undertaken through consideration of aspects such as:

- The project context (i.e. project type, scale, time and location)
- Where the activity sits within the project life cycle
- The sensitivity of the receptors who may be impacted
- Whether vulnerable or marginalized groups may be affected
- The built or natural features of an area
- The boundary of the project-impacted fishing systems, fisheries and related activities
- The relevant social, cultural and/or demographic trends
- The history of the project and/or similar projects or activities

The area of influence should be reviewed and refined based on changes to the project and/or project activities.

SUMMARY OF KEY CONSIDERATIONS

- **Pre-planning for baseline data collection is essential:** in order to be robust enough to suitably inform the impact assessment process (and compensation) baseline data collection will take, on average, at least one year to complete. Whilst this may vary based on the scale and/or size of the project or project activity, practitioners will need to ensure that they have pre-planned what data is to be collected, and what tools/techniques are to be used to collect it, well in advance of project commencement.
- **Baseline data availability is highly variable:** some countries and/or locations will have a wealth of existing baseline data, whilst others will not. In situations where existing baseline data is scarce, consideration of alternative avenues for sourcing data should be explored (e.g. use of local networks or key informants). Where existing baseline data is abundant, this should still be verified through the appropriate field studies. Relying on the outcomes of a literature review alone may not always provide a sufficient understanding of potentially impacted fishers or fishing communities or stand up to external stakeholder scrutiny.
- **Suitable investment in baseline data collection is required:** baseline data collection is not an inexpensive process. It requires balancing the cost of employee resources, institutional resources, capital expenditure, and ongoing expenditure, against the ability to appropriately contextualize and understand the fisheries to be impacted by a project and/or project activity. Having a budget which is appropriate to the activity being undertaken is important in sourcing the appropriate level of data.
- **Baseline data collection is an iterative process:** the collection of baseline data should not be viewed as a single event or 'one-off'. Baseline data collection is an ongoing process that should be used to scope and shape projects or project activities well into operation. Continuous data verification should occur throughout the entire life cycle of a project allowing for impact outcomes to be modified and stakeholder concerns addressed.

COMPENSATION



Questions relating to compensation are common place – particularly at the commencement of a project and/or project activity. As such, it is crucial that companies formulate an understanding of the nature and extent of the receptors likely to be impacted as a result of a project or project activities early in the project life cycle.

Whilst every company will negotiate differently with stakeholders, the successful delivery of appropriately considered compensation is dependent on the development of a robust social baseline.

It should be remembered that compensation (including but not limited to financial compensation) should only be considered once it is determined that avoidance and/or mitigation are not possible. In applying the mitigation hierarchy, where avoidance cannot be achieved, impacts should then be minimized or mitigated appropriately. Where impacts cannot be minimized or mitigated, compensation should be offered.

A more meaningful social baseline will also reduce the reputational risks, as often the engagement involved in data collection will help build trust and reduce conflict.

Baseline indicators

INTRODUCTION TO BASELINE INDICATORS

Before baseline data is collected, practitioners should work with other project personnel in order to establish the social baseline data requirements for the project.

The establishment of data needs will allow for a direction to be set with respect to the future measurement and evaluation of the effectiveness of mitigation strategies (or objectives) put in place to manage the impact of a project on fisheries and local communities.

Establishing data requirements for a project will serve to guide the collection process, specifically the type of baseline data required to be collected.

Practitioners will need to select baseline indicators that are scalable and appropriate for their individual circumstances.

It is important to recognize that limitations imposed on project logistics, timeframes, and/or costs can influence the data collected.

Practitioners should seek guidance from experts with prior social baseline experience in order to ensure the indicators selected are fit-for-purpose.

FACTORS INFLUENCING SELECTION OF BASELINE INDICATORS

Factors that can influence the choice of baseline indicators and the type of baseline data to be collected, include:

- **Significance of likely impact:** the nature and scale of the impacts likely to be experienced as a result of a project and/or project activity, as defined during the scoping process, will guide the type of baseline indicators collected.
- **Operating characteristics of the fishery:** operational characteristics of fisheries will dictate what can reasonably be collected by practitioners, and will influence how the baseline data will be recorded. Accordingly, the nature and type of the fishery, the activities carried out, and the fish handling practices will need to be understood and accounted for as part of the baseline data collection process.
- **Potential data overlaps:** maximizing the potential for baseline data reuse and synergies with other data being collected for a project is particularly important for resource and cost constrained projects. Baseline data collected may have multiple uses and/or can be combined with other data previously collected (e.g. ecosystem services or for different types of projects) to better define the fisheries and/or local community. Leveraging off other work being undertaken will also avoid stakeholder fatigue.
- **Data collection frequency:** the frequency that baseline data needs to be collected should be suitably understood in the context of the project undertaken. The rate that data will need to be collected will be dependent upon the type of data being collected (e.g. GPS monitoring of fishing vessel movement, daily catch quantity records, community demographic changes, etc.) and the capital costs for ongoing data collection. Some data may not need to be collected as frequent as others, however, it will still need to be suitable to the specific project undertaken.
- **Data accuracy:** the accuracy of baseline data collected should be maintained throughout the period required to meet the needs of the project. It is realistic to expect there will be differences in data accuracy (e.g. data data received from household surveys will be less accurate than fish catch quantities), however, consideration needs to be given to how this can be accounted for as part of the baseline, and subsequent use of the data (e.g. compensation payments).
- **Use of standards:** consideration needs to be given to both international and country-specific standards that will inform baseline collection, and importantly, how these may diverge. Where possible, the use of agreed international standards and guidelines will allow for a greater level of consistency with definitions, classifications, and data collection methodologies.



POTENTIAL BASELINE DATA

An outline of potential baseline data that may be used as part of a social baseline assessment is provided in the following section.

It is not the intent of this section to identify every possible baseline data requirement that should be included for every circumstance or project type. Rather, it highlights data that is typically used to characterize and understand fisheries, and provides an opportunity for practitioners to

gain an understanding of how these baseline indicators can be used to more readily measure changes resulting from a project and/or project activity.

Baseline indicators for fisheries will have two components:

1. **Human/cultural:** the fisheries, fishers, local fishing communities and associated persons that have the potential to be impacted.
2. **Physical/biological:** the fish resources and the associated marine systems that are being impacted.

Figure 3: Baseline indicators for fisheries



FISHERIES/FISHING ACTIVITIES

Total catch, fisheries effort, productivity of fishing activities, fishing fleets and patterns, and regulatory aspects.



ECONOMIC

Market price, earnings and costs, domestic supply and consumption, and employment.



LIVELIHOODS

Fisheries access, social status, community demographics, community dependence, income distribution, and fish consumption rates.



PHYSICAL/BIOLOGICAL

Physical (topographic, oceanographic, meteorological) and biological (stock size, stock structure, and community structure) aspects.



Human/cultural – fisheries/fishing activities

BASELINE INDICATORS

Baseline data to help understand the nature of the local fisheries impacted are outlined below.

INDICATOR #1: TOTAL CATCH

Total catch data can either be recorded in total numbers or weight and should be broken into a sufficient level of detail so as to allow for an analysis of the impact experienced by the fishery due to the proposed project.

Catch data should provide an understanding of the **different species** caught and the **priority** of those species to the fishery. Having a combined species yield may not provide a reliable suite of data from which to make informed decisions.

It is recommended that where possible, catch be further broken down into categories that capture catch **season**, the **vessels used**, **fishing areas**, the **average sizes** (e.g. length), **maturity**, **location**, and **dates of the catch**.

Total catch data should be obtained over a period of time to understand the impacts of seasonality and identify an average size of catch relevant to individuals and the wider fishery. Linkages can then be made to data gathered as part of wider stock analyses.

Discards should also be recorded and estimated for inclusion in the total catch data. Often there is some level of discarding at sea and should not be discounted.

INDICATOR #2: FISHERIES EFFORT

Fisheries effort relates to the inputs made by fishers as part of the fishery. Effort can be a function of the fishing activities, vessels used, fleet profitability, or the efficiencies gained through operations.

It is important to understand the **vessel ownership arrangements**, and **who works the vessel** (i.e. crew members).

Data should also be obtained as to the equipment used in the fishery, including the **type of gear** (e.g. trawls/dredge, pole and line, pots, traps, vertical nets), **material composition** (e.g. mesh, hook sizes), **sizes** (e.g. lengths and depths, hook spacing, total line length), **deployment types** (e.g. bottom, midwater, surface, anchored, fish aggregating devices), **vessel details** (e.g. markings, identification numbers, subsidiary vessels, electronics used), as well as the **bait used** on hooks/traps. For active gear, the number and times used in operation should be recorded as well as the soak time for where specifics cannot be obtained, assumptions based on average cases should be used.

Vessel sightings should also be recorded as relevant to the fisheries grounds/locations. In addition, associated identifying markers (e.g. vessel numbers, permits/licence numbers), locations (e.g. latitudes/longitudes), activities undertaken (e.g. setting gear, hauling), and/or any offences observed, should also be recorded.



TIP: Effort may not be the same for every fisher each time they fish. It may depend on the nature of the activity undertaken. For instance, the time spent collecting fish from nets may be different to the time spent erecting the nets or collecting a catch.



INDICATOR #3: PRODUCTIVITY OF FISHING ACTIVITIES

The productivity of fishing activities can be determined through a combination of fish catch studies and information received through discussions with local authorities and/or fishers.

Typically, **catch per unit effort (CPUE)** is used for the purposes of understanding the longer-term implications of impacts to a fishery, as it allows practitioners to understand the stock abundance of particular species. Changes in the CPUE over time may mean greater exploitation, whilst consistency may mean more sustainable harvesting.

CPUE should be determined for each species/stock units and equipment type where possible. At a minimum details to be obtained include species type, season, fishing ground/location, and fishing fleet.

INDICATOR #4: FISHING FLEETS AND PATTERNS

The nature of fishing operations needs to be considered with respect to the fishing fleets and fishing patterns employed by fishers. This may relate to the fishing location, number/types of equipment uses, vessel speed, and directions. Consideration of fishing equipment will need particular attention for long-term baseline monitoring as fishers may upgrade gear to maximize catch volumes.

A range of variables with respect to fishing vessels will need to be considered. Information pertaining to **vessel identification, type** (e.g. trawler, canoe, etc.), power (e.g. sail, motor, etc.), **crew numbers, vessel size, equipment/gear attached, operation times, storage/freezing methods, and communication/electronics** should be recorded and compared with that included on any official registers.

Mapping fishing fleet activities through equipment/gear used (e.g. nets) allows for furthered consideration of activity zones or locations. Understanding the location where fishing occurs is important when considering the anticipated impacts of the project activities being carried out.

This is of particular importance in locations where fishing activities and types will vary based on seasonality or species movement due to changes in the weather and/or marine conditions.

In addition, fishers may use multiple fishing grounds and therefore change their travel routes and fishing patterns.

TIP: The use of GPS trackers (where agreed with fishers) to monitor fishing vessel activities can help to align the location of fishing grounds to information obtained from authorities and/or through discussion with local fishers. Use of GPS trackers may be more readily supported in industrial or commercial fisheries.





INDICATOR #5: REGULATORY ASPECTS

Understanding fisheries ownership and governance structures relative to the location/s wherein the project and/or project activities are to occur is fundamental to understanding how the fisheries operate. This understanding should extend to the **current licensing arrangements** for fishers, as fishers may be provided with permits to fish within certain locations, geographical bands/regions, and/or rudimentary markers in the water. Gathering this information into a map and/or other means of easy reference will be essential when discussing with fishers and the local authorities and/or fishery bodies.

Data relevant to the number and types of offences committed should also be gathered as it may indicate patterns of compliance and/or non-compliance and provide insight into the effectiveness of the current system of governance. Accordingly, information such as the number and costs of **finest issued**, the number and type of **permits rescinded and/or fishing activities suspended**, and the number and type of **prosecutions/convictions** should be collected.

The means by which government agencies transmit and/or provide information to fishers and the local community is also an important consideration as it will allow for an understanding of the adequacy that information can be disseminated. **The types, amount, frequency, and methods for information communication** should be ascertained, and the feedback received (if known) considered.





Human/cultural – economic

BASELINE INDICATORS

Value chain analysis should be undertaken as part of the baseline in order to understand the importance of the fishery to the local economy. Baseline indicators to help understand the economic significance of fisheries are outlined below.

INDICATOR #1: MARKET PRICE

In order to properly interpret the impact of fisheries and the demand for fisheries products, review of prices within local markets should be undertaken. This includes gathering data on the price by species, market grades and levels.

Consideration should also be given to aspects such as the **gross value of production (GVP)** to understand the total production (i.e. landed and processed weights of products multiplied by the prices of products).

TIP: It is not anticipated that local fisheries or fishers will have access to the level of economic data outlined in these indicators. Accordingly, information from national and/or international organizations (e.g. FAO, OECD, or UN) should be used where possible.



INDICATOR #2: EARNINGS AND COSTS

Understanding the profitability of fisheries and the subsequent influence on fishers is important in understanding the impact of a project and/or project activity.

Aspects such as the **fixed and variable costs for vessels, asset ownership costs** (e.g. equipment), as well as **technical detail relevant to vessels**, should be considered.

Information for **suppliers and support industries** (e.g. equipment/gear suppliers or fuel vendors) will also help to bolster fisher data.

Costs associated with **new investments** (e.g. upgrades to expand capacities or capabilities) and ongoing **permitting and management costs** should also be understood. The **administration costs** of harbour docking and/or administrative matters will also need to be collected – along with impacts of government subsidies that may be affected by project activities (e.g. importing tariffs or quantity based rebates).

The **costs of licensing** and the differences between various licensing types (e.g. quota or location based), and the **income generated from any special fishing agreements** (e.g. supply quotas from foreign countries), when collected, will also provide an understanding of the likely incomes generated by fishers.

It may also be of value to understand the **gross value added (GVA)** for a fishery. Essentially, GVA expands on the GVP calculation by also including all costs, with the exception of labour and capital. Therefore, in order to determine the GVA, data relevant to the harvesting/processing revenues generated and the costs associated with harvesting and processing should be collected (e.g. typical expenditures such as ice, salt, bait; insurances; maintenance fees; fuel; packaging).

In addition, in order to contextualize the particular fisheries impacted relative to the economic output of the country wherein the project is occurring, information as to value and volumes of fish imports and exports could also be collected and analysed.



INDICATOR #3: DOMESTIC SUPPLY AND CONSUMPTION

In order to understand the dependence of consumers on stock via domestic fisheries, the **average per capita consumption** can be calculated.

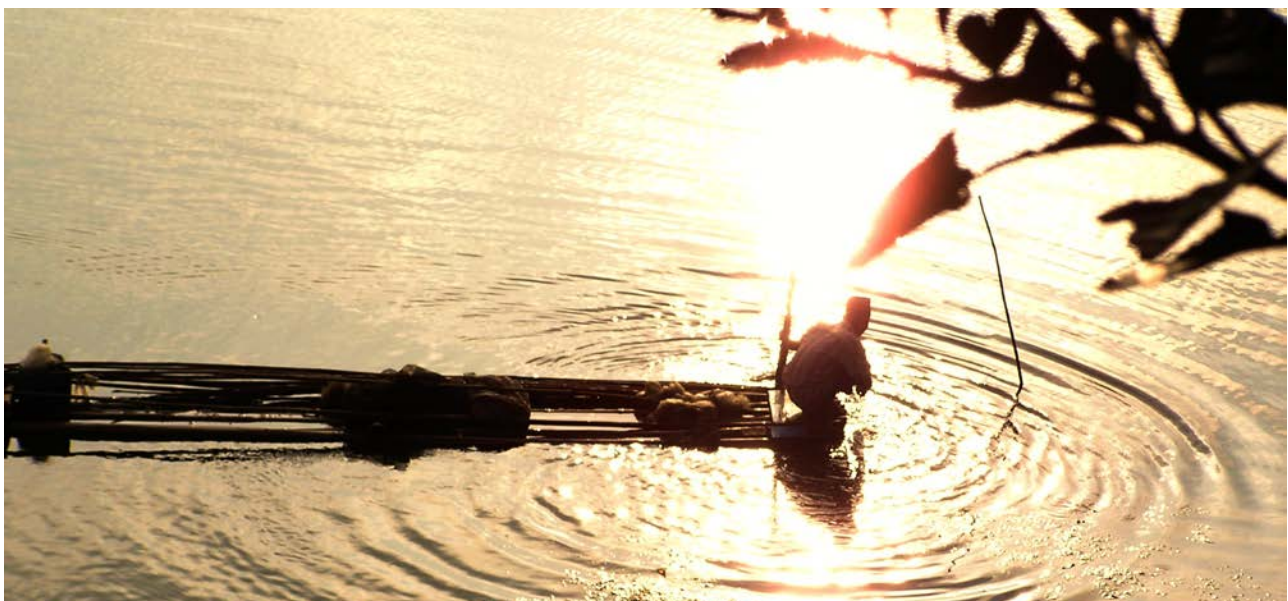
This calculation will require the collection of landing and fishery input/export data, quantity data discriminated by use (i.e. food and non-food), demographic data (i.e. population, average food consumption by food type), and the relevant conversion factors (e.g. weight of fish product to weight of protein by product and/or species).

INDICATOR #4: EMPLOYMENT

The relative importance of the fisheries to the area wherein the project and/or project activity is occurring can be appreciated through understanding the number of persons employed within fisheries and/or fisheries-related sectors (i.e. processing and markets).

Accordingly, the **number of persons employed in the fisheries industry** (considered by age, sex, length of employment, and job category), the number of **persons employed in associated non-fisheries industries**, and the **unemployment rate**, should all be taken into consideration.

TIP: Dependent upon the industry and specific circumstances, people may not be full-time fishers. Rather, people may only be part-time or occasional fishers, working based on seasonality, or to provide additional income to their families. As such, fishing may be an important economic activity, although it may not be the primary form of income or livelihood.





Human/cultural – livelihoods

BASELINE INDICATORS

Baseline data will need to have a household and community livelihood component in order to appropriately couch the information in a manner which is representative of the fishing community affected by the project and/or project activity.

Baseline indicators to help understand the livelihood aspects of fisheries are outlined below.

INDICATOR #1: FISHERIES ACCESS

Access to fisheries is an important element in understanding the impact to fisheries from project and/or project activities. Fishery access may be based on:

- **Institutional arrangements** – this covers both formal and informal means for fishers to gain access to fisheries grounds and utilize resources. The type of access, fishing ground locations, and extent of institutional remit will need to be understood.
- **Membership rules** – management of fisheries resources may stem from a particular body and/or local management regimes that will place rules or requirements on members. These rules may influence access to fishing grounds, and therefore detail as to any institutional rules should be obtained.
- **Nature of access** – the manner that access is obtained or gained for various fishing grounds and/or any conflicts that exist between formal and informal arrangements will need to be determined.
- **Local guidance** – in some instances, access to fishing grounds may be secret, be based on local expert knowledge, or be restricted for certain persons (e.g. gender or belief-based). These localized requirements should be discerned.

TIP: When engaging with Indigenous Peoples, there should be an increased emphasis on the cultural value of a fishery as this serves as a mechanism for the preservation of culture. This sentiment can be hard to quantify but may actually be more important than other metrics.



INDICATOR #2: SOCIAL STATUS

Understanding how fishers and local fishing communities are viewed within the particular area of the proposed project activity is important in order to characterize the community and their livelihoods.

Cultural values associated with fisheries can vary. In some cases, fishing can be seen as a 'last resort' for people, whilst in other cultures the industry is highly regarded and respected. As such, obtaining information as to the relative prestige/value placed on fisheries-related occupations, the desirability of the lifestyle, and the organizations to which fishers belong, will be important to providing baseline context.

The social status of fishers also provides further insight into the **economic potential of individuals and/or the wider community**. Where fishers are more respected, there may be a prevalence of higher incomes, whilst in areas where there is less cultural value placed on the industry, there is the potential for average wages to be lower.



INDICATOR #3: COMMUNITY DEMOGRAPHICS

Understanding the demographics of the fishers is important in determining household participation rates, relative community importance, and existing equity within the community.

Typical **household demographic data** collected should include size, composition, income, place of residence, and extent of participation within the fisheries industry.

Data specific to the fishers should also be obtained. This includes ages, genders, ethnicities, place of residence, years of experience/involvement in the fishing industry, and status of crew.

This demographic data should be considered against data associated with fishing practices employed (e.g. equipment/gear types, species, fishing grounds/locations), vessel characteristics (e.g. size, tonnage, etc.), and wider crew composition and selection information.

Demographic data should also be obtained at the **processing/market level** in order to provide an indication as to the wider employment relevant to the fishery industry within the local area. The employment patterns of markets and/or processing plants, employee composition and profile data can be considered against plant characteristics and decisions previously made by markets/processing facilities (e.g. hiring practices, vessel selection, purchasing preferences, etc.).

TIP: Fishers may have access to, and/or use, a variety of fishing grounds, often to maximize their income. However, fishers are typically less definitive as to where they fish, or reluctant to provide this information, in order to avoid giving away the 'good spots'. A social baseline will need to ensure that there is at least a general understanding of travel routes and fishing grounds used in order to enable impacts to be managed appropriately.



INDICATOR #4: COMMUNITY DEPENDENCE

Understanding how dependent a community is on fisheries will involve consideration of the following:

- **Status and nature of employment** (i.e. how many persons are currently employed by fishing and/or fishing-related industries)
- The **prevalence of fisheries-related infrastructure within the wider community** (e.g. number of people employed as fishers, the number of boats, processing plants, markets, dependent industries, and the extent that infrastructure and government institutions influence fisheries)
- The **incomes** generated by households linked to fishers, and the **dependence on fish as a primary source of protein**
- **Association of the local community with the fisheries industry** (e.g. presence of festivals, statues, community organizations, cultural practices or beliefs)



TIP: Fisheries participation rates amongst households may vary over time due to a range of factors. Dependent upon the length of a project or project activity, consideration will need to be given to variations in participation rates, demographics, and community dependence – particularly when considering compensation.



INDICATOR #5: INCOME DISTRIBUTION

The distribution of incomes related to the fisheries industry will allow for an understanding as to equity within local fishing communities and provides a means to better understand expectations associated with compensatory payments.

In addition to demographic data (refer to Indicator #3, p.18), information related to the earnings will be of importance. Earnings should be captured for each crew member – including the total amount and means by which earnings were achieved (e.g. wage, share-based system, catch value add calculations), as well as for fishing households – including the amount earned through fishing, fishing-related employment, and non-fishing-related employment.

Preparing a baseline that distinguishes between household income derived from fishing, fishing-related, and non-fishing-related employment is important to understand whether a project and/or project activity will have flow-on impacts to a household. For instance, removing nets for a period of time may positively impact upon the extent of business that a person working as a net/fish trap repairer may expect to receive within a given period. Conversely, the permanent removal of boats from an area to facilitate project operation may have a long-term negative impact on the business prospects of a boat manufacturer and/or repairer.

TIP: Understanding gender dynamics of the local fishing community is important. Whilst fishers are typically male, women may be active in other parts of the value chain (e.g. the making of nets, or post-fishing activities).



INDICATOR #6: FISH CONSUMPTION RATES

Gathering data related to the distribution of fish consumption rates within a fishing community provides a means to ascertain whether there are food security issues and therefore better understand the social stability of that community.

In addition to average per capita consumption (refer to the economic indicators, p.20-21), household data associated with budgets and consumption should be collected to provide suitable reference points for understanding the rates and nature of consumption within the community.

In addition, gathering information as to any cultural or religious food practices (e.g. rules for distribution, or use in ceremonies of significance) should be understood.



Physical and biological environment

BASELINE INDICATORS

It is important that a fisheries-specific social baseline includes relevant details to assist in characterizing the physical and biological environment in which the fisheries exist. The intent is not to duplicate the information contained within an environmental baseline, but rather, use this information to help provide context and triangulate the data contained in the social baseline.

Dependent upon the project location (e.g. shoreline, continental shelf), different types of data may be gathered relative to the physical environment. This may include:

- **Topographical** characterization of oceanic environments
- **Types of vegetation** located within and/or in proximity to the marine environment (e.g. mud flats, mangroves, etc.)
- **Meteorological and oceanographic detail** as to the environment, including wind speed and direction, precipitation levels, air quality readings, tidal variations and current directions, wave data, salinity levels, and water temperature variations (stratification)
- **Water column** information including dissolved **oxygen, nutrients, and chemical composition**
- **Benthic habitats** (e.g. lake, river, seabed structures and processes), which should also include information on the presence of any chemical contaminants

The various biological indicators which provide an understanding of the performance of fisheries and associated stock which may need to be considered in a baseline are described opposite.

TIP: The impact of increasing storm events and/or ocean acidification in different parts of the world has the potential to impact fisheries. Understanding these impacts on local fisheries will provide important context for a social baseline.



INDICATOR #1: OVERALL STOCK SIZE

Estimating the stock size will involve gathering data relevant to total catch (and discard) over time. Consideration should also be given to catch per unit effort (CPUE), scientific surveys of biomass (including location, volume of water searched and fished, and biomass detected), annual recruitment (provided by egg, larvae or juvenile surveys), and the outcomes of stock identification undertaken via biological data collection.

INDICATOR #2: STOCK STRUCTURE

Understanding the overall status of stock cannot be done unless there is consideration as to the stock structure (i.e. age, sex and maturity). Generally this is achieved through examination of stock age via otolith rings or scale rings, or size (i.e. fish length and weight). Additionally, sex and maturity information can be obtained via assessment of internal or external characteristics (based on the species).

INDICATOR #3: COMMUNITY STRUCTURE (SPECIES BASED)

Changes in species composition and structure provide a means to understand the overall health of the natural environment. Accordingly, data should be collected to provide information as to species taxonomic groups, composition, and species interactions.

The above data is likely be captured in the environmental baseline studies but can be used to inform and provide context for the information in the social baseline.

Data collection techniques and tools

This section identifies the various techniques/tools that can be used in order to complete a suitable social baseline that characterizes and analyses social receptors.

Data collection techniques and tools

INTRODUCTION TO TECHNIQUES AND TOOLS

There are a range of data collection techniques and/or tools which can be used by social practitioners for collecting the data needed to complete fisheries baselines.

Data collection for social baselines cuts across primary (first-hand accounts or information from direct sources), secondary (information about or related to primary sources), and tertiary sources (synthesize information from the other sources), seeking to confirm data acquired through one means with data obtained from another.

There are a range of factors which influence which techniques or tools are implemented by practitioners, chief of which, are the time and resources required for baseline data collection. These factors are often underestimated.

TIP: Involvement with other private and/or public partners to share data collection responsibilities may help reduce costs and establish a legacy of collaboration, but may be contractually challenging.



FACTORS INFLUENCING SELECTION OF COLLECTION TECHNIQUES AND TOOLS

- **Data requirements:** understanding what data is required at what part of a project and/or project activity is critical in determining what type of technique or tool should be employed, and when. Different stages of project development will require different types of data collection and will be dependent upon project circumstances. Practitioners will need to consider seasonality, fishing periods and event-specific situations in order to determine the optimal timing/s for data collection. In addition, having access to certain types of data early in a project/project activity will help to inform other project considerations (e.g. compensation payment calculations).
- **Significance of likely impact:** the type and extent of data collected will need to align with the scope and scale of the impacts likely to be experienced. If the impacts associated with a project and/or activity are not expected to be significant, the extent of data collection may be limited.
- **Type of data collection:** the approach taken to data collection will need to be determined based on the nature of the data to be collected. Data collected may be based on complete enumeration (all members of the population are measured), or sampling (only a proportion).
- **Data stratification:** when collecting data, practitioners should look to sort the data into smaller groups that is appropriate to the circumstance. For instance, sorting data into administrative or geographical subdivisions, or based on criteria (e.g. size of fisheries).
- **Collection logistics:** consideration needs to be given to the logistics involved in the data collection techniques/tools employed and the realities of time and cost pressures. Whilst a rigorous data collection strategy may be planned for, the ability for the resources to be used for data collection in order to achieve the desired outcome is another matter. Before any data collection occurs, robust pre-planning should be carried out.
- **Cost quantification:** calculating the costs (or at least, approximations) required to undertake data collection is essential in pre-commencement planning. Aspects to be understood by social practitioners include the cost of resources (e.g. employee salaries, field days, training), institutional resources (e.g. costs for arranging or maintaining committees for the collection period, focus groups), capital expenditure (e.g. survey equipment, visual resource preparation), and ongoing expenditure (e.g. continued costs for travel, communications fees).

SUMMARY OF KEY CONSIDERATIONS

- **Use a combination of techniques/tools:** data collection techniques/tools for fisheries stem from a variety of sources and incorporate different strategies for obtainment. In order to achieve the best possible outcome, social practitioners should employ a suite of techniques and tools in the collection of baseline data.
- **Triangulate the data:** data for baseline indicators can be collected more than once and via different techniques/tools. Multi-tool data collection allows for cross-checking and data confirmation and is important to support overall data reliability. Whilst there may be genuine reasons for inconsistent data (e.g. language misinterpretations), there may also be purposeful contradictions (e.g. differences in catch quantities or fishing ground locations) which can be identified and factored into future decisions.
- **Tailor the techniques/tools to the local context:** the suite of techniques/tools used for baseline data collection should be adapted in order to suit the nature and context of the local fishing community. Materials should be developed that help traverse language and literacy barriers (e.g. use of visual aids) in order to avoid miscommunication and misunderstandings, but also facilitate a higher quality of data from fisheries, local communities, and other stakeholders.

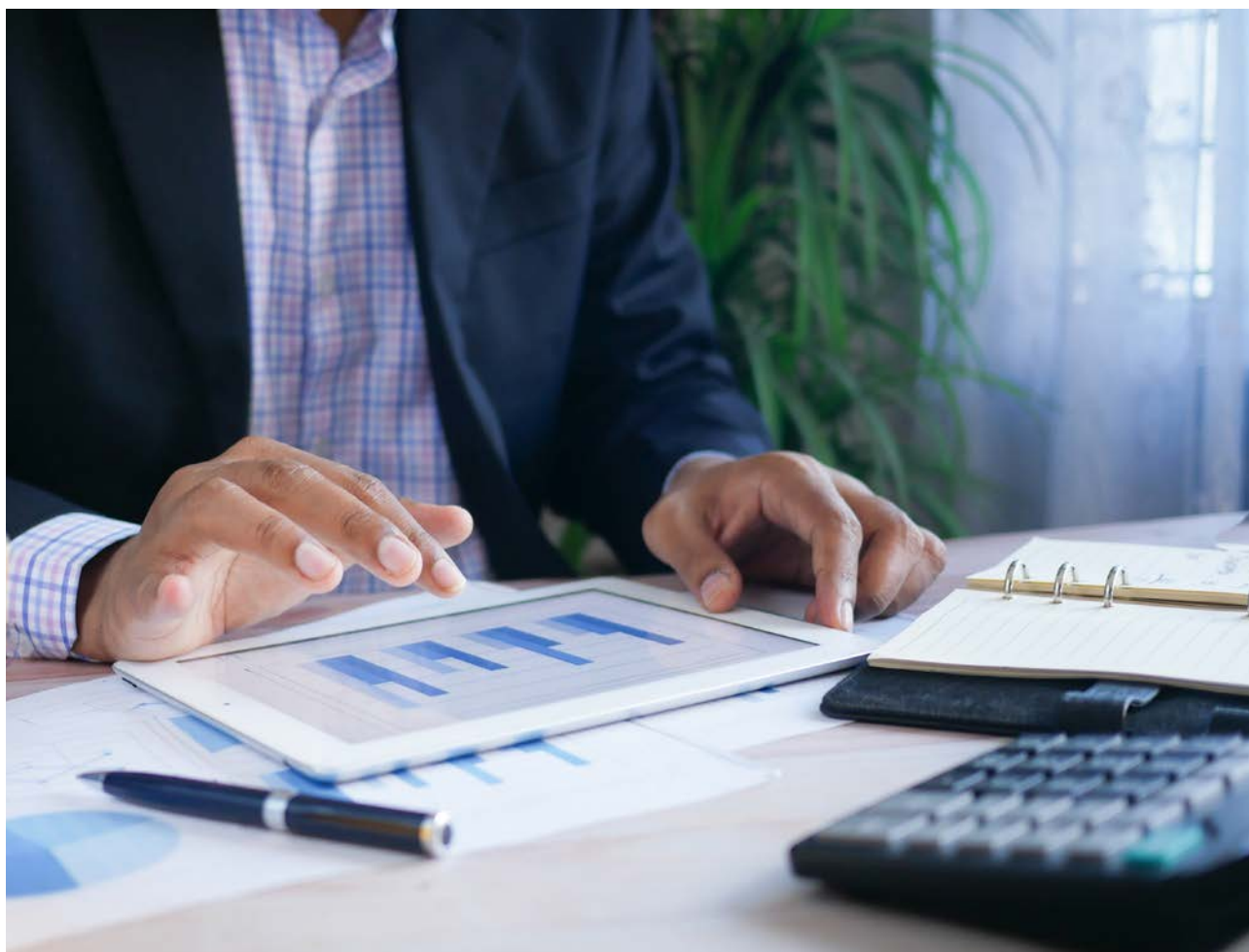


Figure 4: Data collection techniques and tools





Literature reviews

The most basic collection technique/tool that can be employed when preparing social baselines is undertaking a literature review. Social practitioners should look to obtain as much relevant data as possible via existing information in order to help provide a basis for the data collected through other (more direct) means.

Literature reviews help to shape the context of the social baseline providing the **current understanding** as to the fisheries, local communities, international and/or national frameworks wherein the fishery and/or project is located.

When undertaking a literature review, consideration should be given to a range of data sources, including **national and international standards, existing biological/environmental studies or reports, scientific literature** from universities, international experts or fishing organizations, as well as **publications from multinational agencies** (e.g. United Nations, Food and Agriculture Organization).

It is important to appropriately investigate the various forms of literature reviewed to ensure that they are sufficiently robust and reputable, either academically or institutionally. Sources that have not been adequately reviewed should be treated with a degree of scepticism compared with sources that can be suitably verified. It should be noted, however, that in some instances documentation from local sources may not be completely verifiable but it may prove to be an asset with respect to understanding local activities, customs and/or dynamics.

- **When to use:** literature reviews should be used for all social baselines developed by practitioners for project and/or project activities. Regardless of the size or scale of the project, a literature review will contextualize further data collection.
- **Relevant baseline indicators:** informs all areas of physical and biological environment, fisheries/fishing activities, economic, and livelihoods.
- **Timing:** literature reviews are not constrained by timeframes or windows of opportunity, with the exception of publishing dates or regularity of issue. More recent reporting should be prioritized over older literature in order to capture newer analyses or more extensive data collection periods.
- **Resources/cost:** resourcing for undertaking literature reviews should be comparative to the project size and/or scope, and typically can be conducted via online portals or internet searches. Where older and/or location specific literature is required to be sourced this may present a cost for travel, but it is not considered to be cost prohibitive for a project.

TIP: Local knowledge and understanding is crucial. Social baselines cannot solely rely on data gathered from literature reviews and desktop investigations.





Stakeholder interviews

In selecting stakeholders for interviews, it may not always be as simple as the fishers involved, key local community members, and the port and/or regulatory authorities. Practitioners should also interview members from groups such as:

- Traders (e.g. market sellers)
- NGOs involved in the fisheries industry
- University/research groups
- Supporting industry members (e.g. boat, net, trap builders and repairers, processing plant personnel)
- Equipment suppliers (e.g. fuel, ice)
- Delivery/transportation services

Stakeholder interviews can be conducted in either a structured or semi-structured manner. Structured interviews involve a suite of **pre-prepared questions** asked to individual stakeholders or small stakeholder groups. The questions are typically tailored to a particular topic and should be directed toward the particular information sought to be obtained from the respondent, serving to move the discussion along in an ordered manner.

Semi-structured interviews, on the other hand, are more often used for the purpose of data collection on a range of topics from individual stakeholders or small stakeholder groups. The questions asked act as a general guide with interview discussions intended to be free-flowing and less restrictive with the use of visual aids to assist in participant understanding.

Group interviews are typically conducted through the following means:

- **Focus group interviews:** discussions with small groups of stakeholders (e.g. 5-15 people) selected as representatives from various groups. Interviews may seek to ascertain insights into a specific aspect of the fisheries industry (e.g. equipment used, access concerns), customs/beliefs practiced, or the experiences of vulnerable groups (e.g. women, Indigenous populations).
- **Panel surveys:** involve a group of randomly selected individuals interviewed over a period of time. Topics can range widely, but the intent is to understand changes as relevant to a core group of persons as an extrapolation of the wider societal change.
- **Participatory rural/livelihood appraisals:** a problem-solving process that allows stakeholders to have agency in providing information and developing solutions to issues. This approach may more readily allow for the development of stakeholder mapping, livelihood characterization, and the unpacking of fisher concerns as relevant to a project or project activity.

TIP: Arranging targeted focus group interviews with vulnerable groups (e.g. women, Indigenous Peoples) will typically allow for greater depth of insight, as it will reduce the chance of self-censorship.

TIP: Stakeholder interviews should also include participants from vulnerable groups. At a minimum, the inclusion of interviewees from marginalized groups (either fishers, household, or community members) will help to gather specific data, which will bolster community understanding.



- **When to use:** interviews should be part of all social baselines developed by practitioners for project and/or project activities. Identifying community informants in the initial stages will help to deal with less cooperative stakeholders during the interview process. Interviews should be used when there is a requirement for greater complexity in the questions to be asked (compared to information included on a survey/questionnaire) and in locations with lower literacy rates and less cooperative stakeholders.
- **Relevant baseline indicators:** fisheries/fishing activities (fisheries effort, productivity of fishing activities, fishing fleets and patterns, regulatory aspects), economic (earnings and costs, domestic supply and consumption, employment), and livelihoods (fisheries access, social status, community demographics, community dependence, income distribution, fish consumption rates).
- **Timing:** engage with stakeholders early (i.e. concept design stage) to gather local knowledge to inform the project and/or project activities to be carried out. For instance, early interviews with local fisherman may identify a more appropriate time to undertake works to minimize impacts on the local community or provide information about when best to conduct baseline data collection. Ongoing stakeholder engagement is recommended.
- **Resources/cost:** costing for structured interviews will be dependent upon the personnel used in undertaking the work – typically researchers or practitioners. Costs can be reduced via use of online and/or telephonic means (particularly for structured interviews which rely on pre-established questions), however, they are typically less effective than in-person interviews – which will mean multiple field days for personnel undertaking the work. In addition, focus groups and participatory rural/livelihood appraisals will require materials development and presentation time. Panel surveys will require investment over the longer term.

TIP: Building positive relationships with local communities and regulatory authorities through engagement will reduce potential reputational risks and allow for a better understanding of baseline conditions.





Stakeholder surveys/questionnaires

Practitioners may look to use surveys or questionnaires to help understand the wider fishing community. **Targeted surveys customized to the type of information sought to be obtained** (e.g. fish/catch data, community data, household spend) can be provided to a range of different stakeholders, including local community members, fisher households, fishers, and traders/suppliers.

Dependent upon the community, surveys/questionnaires can be prepared and then distributed amongst the target group via either physical means or electronically. Electronic distribution may allow for increased engagement, enable improved community sampling, provide a safe environment to encourage honest responses, increase transparency and responsiveness, and reduce data collection/collation efforts. The ability of the target group to access email/internet platforms, however, will need factoring into considerations.

Any surveys/questionnaires produced should be **clear and concise** with the questions asked, avoid 'double-barrelled' questions, and provide a greater number of closed questions (e.g. multiple choice or scale-based) compared to open-ended questions. This will reduce data variability but still provide the option for more detailed responses. The ability to collate and interpret data received will be critical to the success of the survey and use in the social baseline.

Brevity when designing survey questions is also recommended, as majority of persons will lose interest in completing a survey/questionnaire relatively quickly. There may be the option to coordinate with other non-governmental organizations (NGOs), agencies, and/or local community groups seeking similar information to avoid survey fatigue.

Surveys/questionnaires should be drafted in languages that all members of the local community (or target group) can understand. Where there are different language groups, **translations should be provided** to ensure all voices are adequately heard and data is not limited to a particular language group.

- **When to use :** similar to stakeholder interviews, the use of surveys/questionnaires should be based on the nature of the local community relevant to the project and/or project activity. The use of surveys/questionnaires in communities with lower literacy rates is not recommended due to the requirement for individuals to complete the surveys and thus there is increased risk of misinterpretation.
- **Relevant baseline indicators:** fisheries/fishing activities (fisheries effort, productivity of fishing activities, fishing fleets and patterns, regulatory aspects), economic (earnings and costs, domestic supply and consumption, employment), and livelihoods (fisheries access, social status, community demographics, community dependence, income distribution, fish consumption rates).
- **Timing:** if surveys/questionnaires are to be used, they should be prepared and distributed early in the baseline process to ensure a suitable period for responses to be provided and interpreted. The frequency of survey/questionnaire provision will be based on the nature of the information required (i.e. regular data collection to inform ongoing baseline updates or infrequent target group 'snap-shots').
- **Resources/cost:** costings for surveys/questionnaires is based on the resource requirements of developing questions, the method of distribution (printed/electronic hosting), frequency of survey, and the time taken to collate and analyse results. Compared to in-person interviews, the time required for practitioners to be in the field is reduced, contributing to potential cost savings.



Registration and licensing

Accessing the information contained within existing fisheries registration documents and/or licences is crucial to understanding the information that has been officially documented by government agencies and/or fisheries organizations as relevant to fisheries and local fishers.

Information pertaining to the **nature and type of vessels** used (e.g. size, equipment/gear, fish holding capacity, crew composition) is usually recorded in these documents, and in some cases, the **location and types of fishing undertaken** – particularly where fisheries licences are issued based on fishing bands or zones.

Analysing fisheries licence information at a more holistic level will also provide information as relevant to licence renewals and therefore also provide detail as to the trends in the **number or types of licences issued over time and changes in equipment/gear**. Capturing this change will allow for an understanding as to fishery viability and/or seasonality.

Registration data from government agencies may also be available relating to the **supporting fisheries industries** (i.e. markets and processing plants), which can help to understand the economic outputs and capabilities of the local community.

Consideration must be given to the size and scale of the local fisheries, as well as to the extent to which the government contains records wherein the project and/or project activity is being undertaken. When sourcing register and/or licensing information there is a chance that smaller artisanal fishers may not require vessel registrations and/or local fishers may not provide correct data to government agencies in order to protect their livelihoods.

- **When to use:** sourcing baseline data from fisheries registers and licences should be part of all social baselines developed by practitioners for project and/or project activities as it provides regularly reported information standardized by the requirements of a government agency and/or fisheries organization. Whilst the extent of information available may change based on county capability, it is an important starting point.
- **Relevant baseline indicators:** fisheries/fishing activities (total catch, fisheries effort, productivity of fishing activities, fishing fleets and patterns, regulatory aspects), economic (market price, earnings and costs, employment), and livelihoods (fisheries access, community demographics, community dependence).
- **Timing:** accessing and reviewing information from registers and licences should occur once connection has been made with the relevant authorities. The tools should be employed as part of the concept design stage in order to help contextualize information received from stakeholders. On occasion there may be difficulties in accessing this information without localized knowledge and/or intermediaries may need to assist. The frequency of repeated collection can be slow as often registration or licence renewal is an annual and/or seasonal requirement.
- **Resources/cost:** the extent of resources required for the purposes of baseline data gathering from registers/licences is limited, however the time taken to analyse registry information could be substantive (dependent upon the quantity of information). In some cases, there may be an administrative cost to access records that will need to be paid.

TIP: The use of registration and licensing information should not replace the need for 'ground truthing' baseline data. Many fishers may not be formally registered with a government agency and/or fisheries organization.





Direct data sources/observations

Obtaining data directly from the source provides for the most accurate means of baseline data acquisition. As such, the employment of individuals to act as either observers, scientific researchers, or participant-observers, will allow data obtained via other means to be suitably cross-checked and validated.

Based on specific project circumstances, direct data collection techniques/tools that can be employed for projects and/or project activities may include, or be a combination of:

- **'At-sea' observations** – provides catch and fisheries effort information, as well as biological data on fish species
- **Dock/landing site inspections** – provides information on catch at landing, biological and fisheries effort
- **Sampling of catch yields** – biological data on fish species and catch information
- **Local market visits** – economic information pertaining to prices, supply, and earnings
- **Processing plant inspections** – more accurate biological and catch information
- **GPS tracking/vessel monitoring systems** – fisheries access and movement patterns
- **Satellite/photographic interpretations** – interpretation of catch and vessel data

An appropriate level of training and supervision will need to be provided to people employed to ascertain this type of information. Training is of particular importance when technological tools are to be used (e.g. fishers/vessel captains will need training to ensure GPS recordings are accurate).

Consideration will also need to be given to matching those employed with the type of data sought to be collected (e.g. hiring key persons within the local community, experienced practitioners, or academic specialists).

- **When to use:** incorporating means to directly source baseline data related to fisheries relevant to the project and/or project activity is a critical element. The choice of what those direct data sources are will be based on the timing of the activity, the costing limitations imposed by the project, and the context of the local fishing community.
- **Relevant baseline indicators:** physical and biological environment, fisheries/fishing activities (total catch, fisheries effort, productivity of fishing activities, fishing fleets and patterns), economic (market price, earnings and costs, domestic supply and consumption, employment), and livelihoods (fisheries access, community dependence, income distribution).
- **Timing:** dependent upon the nature of the baseline indicators and/or the target audience, the timing required for implementing and operating direct observation techniques will need to be established at the outset. This timing will have flow on implications for what data can be obtained. For instance, to obtain a useful suite of data via GPS vessel tracking, the GPS monitors would need to have been installed on each vessel for approximately a year or a season prior.
- **Resources/cost:** given that direct data sources either rely on individuals employed for the purpose of collecting baseline information, or use technological instruments to acquire data, the cost of resources, capital expenditure, and ongoing expenditure is high. The specific cost will vary based on the techniques or tools employed and the period of time required for data collection. There may be efficiencies that can be gained through using observers to also undertake stakeholder interviews and/or distribute surveys/questionnaires.

TIP: Selecting the right people is important to achieving successful data collection. If fishers or other stakeholders perceive a conflict of interest this will impact on performance.





Reporting

As an addition and/or alternative to direct observations, social practitioners can access reports filed by fishers and/or fishing companies. Whilst the reliability of the data cannot be verified completely, the data recorded in these reports must be submitted and confirmed by government agencies and/or fisheries organizations. As such, there is a level of certainty that can be attributed to the data, which allows for use in social baselines.

Reporting data can be obtained through various means, including:

- **Catch diaries** – recorded by the captain and provides detail as to the fishing trips undertaken, locations, and extent of catch (e.g. fish species and weights)
- **Logbooks** – completed by the captain (or crew) for larger fisheries vessels and typically contain only the essential information relevant to the catch and effort for each trip
- **Landing declarations/records** – includes data associated with the species, quantities, and weight of the landed stock, but may be provided over a period of time (e.g. submitted weekly or monthly)
- **Sales notes/records** – authorities responsible for the sale of landed stock need to inform national authorities as to the quantity of species, vessel information, total weight by sale, and pricing

The collection of baseline data from these types of sources means that the various components of fisheries operation can be sampled.

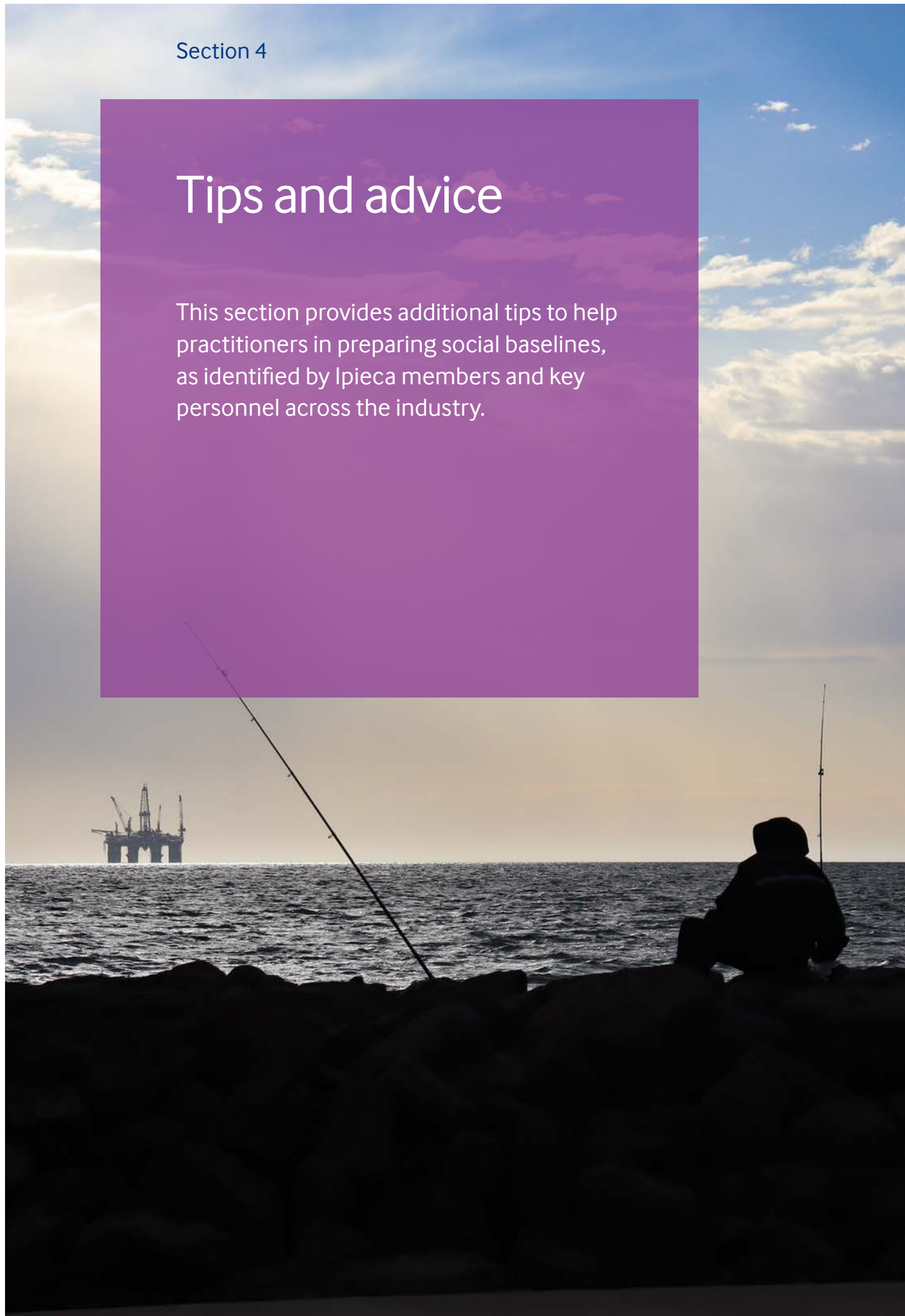
- **When to use:** reports filed by fishers and/or fishing companies should be used either in the absence of direct observational data obtainment, or in order to complement and help validate observations. Whilst the type and quality of the reporting data will vary based on project location, some form of record will need to be submitted to satisfy government authorities and/or fisheries organizations – and therefore can be obtained.
- **Relevant baseline indicators:** fisheries/fishing activities (total catch, fisheries effort, fishing fleets and patterns, regulatory aspects), economic (market price, earnings and costs, domestic supply and consumption), and livelihoods (fisheries access, community dependence, income distribution).
- **Timing:** data should continue to be compiled throughout the whole of the project period as fishers return with catch information and sell onward through the processing plants and markets. As such, an initial suite of data should be obtained at the concept design stage, and then updated and augmented based on additional/newer data received on a periodic basis.
- **Resources/cost:** the cost associated with obtaining reports from fishing companies, government agencies, market operators and/or traders, is generally related to the time allocated for data acquisition. However, most organizations should have this data on-hand. It should be noted that dependent upon the country and method of obtainment, there is the potential that the reports may be available in digital formats, which would reduce the cost of external compilation. Other organizations may only have paper copies, which will require additional resources to work through.

TIP: There is a possibility that government agencies and/or fishing organizations will only supply information that has been redacted for privacy. This will pose an issue with regards to the accuracy of the baseline data.



Tips and advice

This section provides additional tips to help practitioners in preparing social baselines, as identified by Ipieca members and key personnel across the industry.



Practical tips

TIP #1: UNDERSTAND STAKEHOLDER CONTEXT



It is important to understand the context in which stakeholder feedback is provided. For example, if the current state of the fisheries industry in the local area is poor, there is the potential for stakeholders to assign blame onto an incoming project.

TIP #2: COMMUNITY INVOLVEMENT



Involving the local fishing community in social baseline data collection can help to bring legitimacy to the data, build relationships, and strengthen the social licence to operate. Doing so will require a suitable level of investment in time and training.

TIP #3: ESTABLISH CLEAR BOUNDARIES



Use the social baseline data collected to set 'boundaries' or 'guidelines' with local fishers up front, prior to work being conducted, particularly when it comes to compensation.

TIP #4: BUILD LOCAL NETWORKS



Work with local organizations/groups to help with baseline data collection. This could be a local industry group, university, NGO, and/or government agency. This can provide access to data that would not otherwise be readily available.

TIP #5: KNOW DATA COLLECTION TIMEFRAMES



Understand the required baseline data collection timeframes and consider how much time you have to collect data. It is not an easy or quick process and will depend upon the activity and the circumstances unique to each project.

TIP #6: JOINT DATA COLLECTION



Often, several companies may operate in the same area and impact upon the same fishers or fishing communities. If there are multiple projects and/or project activities occurring or planned within an area, there is the potential for companies to work together to jointly collect data. Doing so will help to increase understanding and better inform future decision-making.

TIP #7: MAINTAIN SUPPORT



Maintaining practitioner support throughout the whole baseline process is critical. This support will allow for community liaison resources to be embedded within the project from the start and provide an avenue to understanding local community concerns.

TIP #8: UNDERSTAND COMMUNITY VARIABILITY



Despite being from the same local community there may be a high degree of variability amongst fishers, equipment/gear used, catch quantities, fisheries access, income distribution, and social status. This variability may also reveal tensions amongst fishers. These aspects will need to be accounted for as part of the baseline data collection.

TIP #9: FISHERIES INTERFACE



There may be different types of fisheries operating within a local community. Seasonal and/or artisanal fisheries may be co-located with larger-scale operations. In addition, the industrial fisheries may use the seasonal/artisanal fisheries to bolster their own fish stocks. This relationship will need to be understood.

TIP #10: DATA COLLECTION IS NOT A 'ONE OFF'

The baseline data collection process should not simply be completed at the start of a project and/or project activity and then shelved. Baseline data collection should continue throughout the entire life cycle of a project with continuous data verification occurring and feeding into updates in the impact assessment and management measures.

TIP #11: SHARE RESULTS

When undertaking baseline studies and using resources from local governments, local companies, NGOs, and fishing organizations, ensure that the results compiled from the data collected are shared amongst those who participated. This will encourage continued learning and development, as well as foster a sense of trust and partnership.



Case studies

This section provides a suite of case studies drawn from a range of offshore projects in order to demonstrate that the development of a technically robust and appropriate social baseline is possible in varying global contexts.

Case study 1

Oil and gas company – seismic surveys, Europe

PROJECT BACKGROUND/SCENARIO

An oil and gas company sought to undertake a marine 3D seismic survey off the coast of a country in Europe. The seismic survey was intended to inform the potential future extraction of gas from offshore gas fields.

Prior to undertaking the seismic surveys, the company prepared a social baseline in order to understand the extent to which the project may impact the crab pot fishers located in nearby local communities. The company understood that in order for the seismic survey works to be completed, fishers would need to remove their fishing gear, which would include approximately 83,000 crab pots.

In order to build a social baseline for the project, the company initially identified and interviewed 30 stakeholders in the local area. This provided an opportunity to gauge stakeholder perspectives on the project. Building upon this initial engagement, the company then arranged to meet with the local fishers and the local council in order to understand the most suitable time of the year to complete the survey.

As part of the baseline data collection process, the company sought out information on fisheries/fishing activity from the fishers, including reports submitted from fishers outlining the results from the previous three seasons. The data collected allowed for a defensible compensation formula to be developed.

Once the baseline data had been collected, and an impact assessment carried out, the company sought to undertake the seismic survey the following year. The survey was initially scheduled to take place over a four-week period, but it was postponed. In anticipation of survey commencement, the fishers had already removed their crab pots, resulting in an impact on their income. The company paid compensation to the fishers who could provide photographic evidence that they had removed their crab pots.

DATA COLLECTION TECHNIQUES AND/OR TOOLS USED

In order to prepare the social baseline for the marine 3D seismic survey, the following data collection techniques/tools were used:

- **Stakeholder interviews:** interviews with local fishers and local government authorities. This allowed for an understanding of the fishing grounds in lieu of direct data sources (e.g. GPS vessel tracking).
- **Reporting:** the company sought baseline data from local fishers through records collected as part of their fishing activities. This data included the number of fleets/pots and relevant vessel information, including the number of people, tonnage, lines, and times out per day.
- **Registers and licensing:** catch data from the previous three seasons filed with the fisheries association was used to verify the catch information supplied by fishers.

KEY INSIGHTS OR LESSONS LEARNT



- If GPS vessel tracking is to be used to collect baseline data, initial tracking needs to commence at least a year in advance. In this case, the GPS tracking did not start early enough to provide meaningful data to reflect the seasonable variability of the fishery.
- Stakeholder engagement is not a quick process. The engagement process starting with the initial 30 stakeholder interviews took approximately one year to complete.
- Consideration needs to be given to what happens to fishers in the period during which project activities are occurring. There remained a concern that when fishers left the water during the project period, others would fish their grounds.

Case study 2

Oil and gas company – fibre optic cable, South America

PROJECT BACKGROUND/SCENARIO

An oil and gas company sought to install a high-speed fibre optic cable to support its offshore and onshore operations off the coast of a South American country.

In order to undertake this work, the company needed to utilize a social baseline to understand the impacts likely to be experienced by local fishers during construction and operation of the fibre optic cable, and establish a clear basis for compensation payment calculations.

During the project planning phase an ecosystem survey (using geographic information system technology) was utilized in order to lay the foundation for identifying fisheries along the coastline. A fisheries survey was also utilized to capture data relevant to the total catch and identify specific fishing ground locations. This was followed by a national market retail survey. Finally, a compensation plan was developed through targeted stakeholder engagement with fishers, Department of Fisheries, and fisheries officers.

The process followed by the company allowed for a robust understanding of the impact to licensed fish pen owners for the defined period of disruption to their activities. Steps in the process included:

- Conducting a reconnaissance trip of the routes to shore to identify fish pens within the fibre optic cable installation area and the temporary tagging of fish pens for removal
- Identifying and engaging licensed fish pen owners and determining a suitable lead for negotiation with fishers
- Having the fishers remove the fish pens identified through prior engagement activities
- Compensating impacted licensed fish pen owners and verifying that owners were compensated
- Installing the fibre optic cable along the approved cable route
- Providing a post-installation bonus payment to fishers for ensuring that the installation corridor remained unobstructed by new fishing pens

DATA COLLECTION TECHNIQUES AND/OR TOOLS USED

- **Stakeholder interviews:** due to the scale of the project, interviews held with the Department of Fisheries and fishers were effective in developing a good understanding of the local context.
- **Registers and licensing:** understanding of the fishers impacted by the project was partially sourced from the licensing arrangements in this country (verification was through stakeholder interviews and observations).
- **Direct data sources/observations:** GPS tools were used to understand fishing grounds used by the fishers during the ecosystem survey. In addition, local contractors employed helped to confirm the various fishing activities through use of total catch data, a national market retail survey, and on-site observations.

KEY INSIGHTS OR LESSONS LEARNT



- **Stakeholder interviews:** due to the scale of the project, interviews held with the Department of Fisheries and fishers were effective in developing a good understanding of the local context.
- **Registers and licensing:** understanding of the fishers impacted by the project was partially sourced from the licensing arrangements in this country (verification was through stakeholder interviews and observations).
- **Direct data sources/observations:** GPS tools were used to understand fishing grounds used by the fishers during the ecosystem survey. In addition, local contractors employed helped to confirm the various fishing activities through use of total catch data, a national market retail survey, and on-site observations.

Case study 3

Oil and gas company – fisheries study, Asia

PROJECT BACKGROUND/SCENARIO

An oil and gas company undertook a seismic survey campaign for the purpose of informing exploration and drilling activities in the offshore territorial waters off the coast of an Asian country.

Presented with the problem of limited existing baseline data pertaining to the fisheries present within the survey area, the company decided to partner with regional and national wildlife conservation groups and two universities to develop a fisheries study. The purpose of the fisheries study was to collaboratively develop a deeper understanding of fishing activities, fisheries dependent communities, and marine wildlife occurring along the country's coastlines.

Carried out over a 13 month period, the fisheries study acquired fisheries data in the region. The study involved an extensive literature review of published reports, key informant workshops to identify important coastal fishing villages, interviews with local fishers and local fishing communities, participatory mapping sessions with volunteers, and completion of a household survey across the villages. After the consultation activities were complete the data was analysed with findings presented in a final workshop involving key stakeholders.

Overall, the baseline data collected from this fisheries study was used (in part) by the company in order to inform its seismic survey campaign, as well as identify a number of recommendations with respect to sustainable fisheries, coastal livelihoods, and marine biodiversity conservation in the country.

The collaborative effort displayed by the company in working with various organizations and universities to develop the fisheries study was lauded by the country's Department of Fisheries.

DATA COLLECTION TECHNIQUES AND/OR TOOLS USED

In order to prepare the fisheries study to support the seismic survey campaign, the following data collection techniques/tools were used:

- **Literature reviews:** reviews of existing published reports helped to identify important fishing villages and townships within the area likely to be impacted by the project.
- **Stakeholder interviews:** a series of individual interviews and workshops were held with district officers from the Department of Fisheries, representatives of coastal fishing communities, university staff, NGOs, and local civil society organizations.
- **Stakeholder surveys/questionnaires:** household surveys were prepared and distributed to selected fisheries households within the local communities previously identified in order to understand local pressures and concerns, and gather further inputs for baseline analysis.
- **Registers and licensing:** fisher licence information was obtained and analysed to inform baseline development.

KEY INSIGHTS OR LESSONS LEARNT



- In order to bridge the language barrier, project information (i.e. seismic surveys) was explained to local communities through a video. Simplified drawings of the different types of fishing methods/fish species were presented to community members during the field surveys. This helped to verify the types of fishing techniques used and avoided any miscommunication and misunderstanding.
- Collaborative efforts in developing social baselines is particularly beneficial in locations where there is limited existing information. In addition, collaboration with other companies and/or organizations provides an opportunity to develop deeper partnerships.

Case study 4

Renewables developer – offshore wind farm, Asia

PROJECT BACKGROUND/SCENARIO

A leading power and renewables development company was seeking to develop a floating wind farm off the coast of an Asian country after a successful wind measurement campaign.

In order to inform the environmental impact assessment (EIA) process for the offshore wind farm, a social baseline was required to be developed. The floating platforms required the use of a new technology in order to sufficiently anchor the floating platforms to the seabed whilst allowing for detachment for platform inspection. It is recognized that there is the potential for increased stakeholder apprehension with the use of new technology, particularly in an environment where fisheries stakeholders have previously voiced their concern over offshore wind farms impacting their operating radius, and reducing yield due to noise, vibration, and possible turbine chemical leakage.

It was decided that in order to assist in developing an appropriate social baseline and afford a social licence to operate, the direct involvement of the local fishers and fishing communities would be essential. Their involvement would not only help to provide a sense of legitimacy, but also allow for a deeper understanding of actual and perceived community concerns.

Accordingly, a suitable timeframe for baseline data collection was established (coinciding with the other technical studies involved in the EIA), and a programme for data collection developed. Initial stakeholder interviews with the regulatory authorities, fisheries, and key members of the wider fishing communities were conducted, as well as on-the-ground observations of fish catches and yields. These activities were cross-referenced with literature reviews of existing data, an analysis of the fishing licensing and reporting records, as well as the outcomes of marine habitat and species assessments completed for the wider EIA, in order to build a suitable social baseline for the project.

DATA COLLECTION TECHNIQUES AND/OR TOOLS USED

In order to support the development of a social baseline for the offshore wind farm, the following baseline data collection techniques/tools were used:

- **Stakeholder interviews:** given the general concerns raised by fishers with respect to offshore wind farms, it was identified early that understanding the local fishers and the fishing community would be of fundamental importance to understanding the social context of the project.
- **Direct data sources/observations:** as fishers expressed concerns around the impact of turbines on yields, it was important to understand the current extent and composition of catches.
- **Literature reviews, registers and licensing, and reporting:** these techniques/tools were used in order to verify and triangulate the data received from the fishers and the direct observations recorded.

KEY INSIGHTS OR LESSONS LEARNT



- Given the previous concerns raised by fishers with regards to floating wind farms in Asia, formulating opportunities to involve the local fishers and fishing communities in social baseline data collection processes helped contextualize and legitimize future outcomes for fishers.
- The data collection timeframe for the social baseline was defined at the commencement of the EIA process. Whilst it sought to align with the other technical studies, the timeframe identified in the wider project schedule was appropriate to the types of data collection techniques and/or tools involved.

Case study 5

Mining company – fisheries study, Oceania

PROJECT BACKGROUND/SCENARIO

A company sought to develop a solar evaporation operation on the coast of a country in Oceania. The project involved the construction of a number of large evaporation ponds, processing plants, port facilities, and supporting marine infrastructure, that would have offshore components, such as seawater intake pipelines and the establishment of new shipping channels through dredging.

In order to inform the impact assessment report for the proposed development, a social baseline was developed, which was principally informed by a fisheries study. The fisheries study was commissioned to understand the impacts of the project on four nearby commercial fisheries and aquaculture operations, all of which reported recent fisheries effort within the proposed area of operation for the project.

The fisheries study was completed in two phases:

- Phase 1 focused on obtaining publicly available data in order to formulate an initial understanding of the fishery operations likely to be impacted. This literature review included gathering baseline data relating to species, fishing methods, fisheries effort, operator numbers, management arrangements, and gross value of production. This data was then supplemented by the various biological indicators for each operation (e.g. stock structure).
- Phase 2 involved the rollout of a targeted consultation campaign focusing on the identified fisheries from Phase 1. The intent was to obtain more operation-specific information that would help to corroborate and verify the prior desktop-based work.

The key concerns raised by the fisheries, such as the effects of disturbance caused by shipping/dredging and project infrastructure, and the potential for the project to cause a loss of productivity, were then considered in the impact assessment report, and relevant management measures implemented in the project approval.

DATA COLLECTION TECHNIQUES AND/OR TOOLS USED

In order to support the development of a social baseline for the project, the following baseline data collection techniques/tools were used:

- **Literature reviews:** used in Phase 1 of the fisheries study in order to provide the current understanding as to the fisheries, local communities, and national regulatory frameworks for fisheries where the project is located.
- **Stakeholder surveys/questionnaires:** as part of Phase 2, a questionnaire was developed for the aquaculture and commercial fishing operators identified in Phase 1. The questionnaire was used in order to understand the likely extent of project impact on business operations.
- **Direct data sources/observations:** total catch and fisheries effort data was examined in order to establish the extent of existing yields from the commercial fishing operation.
- **Reporting:** an assessment of effort logbook data was used in order to confirm information received via the questionnaires.

KEY INSIGHTS OR LESSONS LEARNT



- The data obtained during Phase 1 of the fisheries study was primarily country-wide and was not localized to the project area. The limited ability to obtain more localized data reinforced the understanding that social baselines cannot solely rely on data gathered from literature reviews.
- After understanding the baseline context, the impact assessment report determined that the impact on fisheries was not likely to be significant. However, the company realized there was still a need for ongoing consultation to ensure it maintained a social licence to operate.

Case study 6

Oil and gas company – fisheries management programme, Asia

PROJECT BACKGROUND/SCENARIO

An oil and gas company was seeking to construct and operate two offshore production wells and associated facilities off the coast of an Asian country. In order to assess the commercial viability of the concession block, a series of exploration drilling activities were scheduled to occur over a period of three years.

From an initial literature review, it was determined that due to the distance from shore no recreation and/or artisanal fishers were located within the project area. However, there were a number of commercial fisheries that operated within the concession block.

A social baseline was developed for the project which supported development of a Fisheries Management Programme. The Fisheries Management Programme was developed to specifically identify, assess, and manage the potential direct and indirect impacts likely to be experienced by commercial fishers as a result of installation, operation and decommissioning of the project.

Key fisheries stakeholders were identified through a series of interviews with local fishing associations/organizations. Interviews were subsequently undertaken with the heads of each fishing association/organization which allowed for further understanding of key baseline indicators, including fisheries effort, fishing fleets and patterns, and market price.

The outcomes of the Fisheries Management Programme were subsequently used by the company to inform future community investment and the implementation of a compensation framework for the project.

DATA COLLECTION TECHNIQUES AND/OR TOOLS USED

In order to support the development of the Fisheries Management Programme (and social baseline) for the project, the following baseline data collection techniques/tools were used:

- **Literature reviews:** undertaken in order to understand the current extent of fisheries within and/or in the vicinity of the proposed project.
- **Stakeholder interviews:** carried out with the various fishing associations/organizations within two periods of stakeholder engagement. Interviews were used as both a means to confirm relevant stakeholders, as well as gather data relevant to key baseline indicators.
- **Registration/licensing:** the commercial nature of the fisheries identified allowed for the ready obtainment of official data documented by the various fisheries associations/organizations relevant to project area.

KEY INSIGHTS OR LESSONS LEARNT



- The Fisheries Management Programme focused on the commercial fishery organizations/associations, rather than the individual fishers and local communities that may be impacted by the project. While this strategy was recommended by the relevant government agencies, it was recognized by the company that greater disaggregation of data was required as part of any future updates to the Fisheries Management Programme. In particular, it was identified that there was limited understanding of vulnerable groups (e.g. women) present in the associated fishing communities. Understanding this information will ensure a more equitable outcome for fishers in the future.



Ipieca is the global oil and gas association dedicated to advancing environmental and social performance across the energy transition. It brings together members and stakeholders to lead in integrating sustainability by advancing climate action, environmental responsibility and social performance across oil, gas and renewables activities.

Ipieca was founded at the request of the United Nations Environment Programme in 1974. Through its non-lobby and collaborative approach Ipieca remains the industry’s principal channel of engagement with the UN.

14th Floor, City Tower
40 Basinghall Street
London EC2V 5DE
United Kingdom

T: +44 (0)20 7633 2388

E: info@ipieca.org

 [Ipieca](#)
 [@Ipieca](#)
www.ipieca.org

© Ipieca 2023
All rights reserved.