Draft Fishery Monitoring Policy Statement (SUBJECT TO CHANGE) – OCT 2, 2018

Table of Contents

1.0 Introduction ............................................................................................................................................. 1
2.0 What is fishery monitoring? ...................................................................................................................... 2
3.0 Why is fishery monitoring important? ....................................................................................................... 2
4.0 Scope ......................................................................................................................................................... 3
5.0 Authorities .................................................................................................................................................. 3
6.0 Policy Objectives ...................................................................................................................................... 3
7.0 Policy Principles ......................................................................................................................................... 5
8.0 Fishery Monitoring Programs – Cost Responsibilities ................................................................................. 6
9.0 Implementation of the Policy ................................................................................................................... 6
10.0 Performance measurement ...................................................................................................................... 8
11.0 Glossary .................................................................................................................................................... 8
12.0 References .............................................................................................................................................. 12
Annex 1: Examples of Fishery Monitoring data collection methods ................................................................. 13
Annex 2: How does the Policy relate to existing policies and programs on fishery monitoring? ............... 14

1.0 Introduction

The Fishery Monitoring Policy sets out the objectives for fishery monitoring in Canada’s federally-managed fisheries, identifies principles to guide the establishment of fishery monitoring in individual fisheries and describes a decision making approach to establish fishery monitoring requirements in individual fisheries.

This Policy is part of the Department’s Sustainable Fisheries Framework (SFF) suite of policies. Dependable, timely and accessible fishery data is essential to effectively apply the SFF policies on the precautionary approach, bycatch, forage species and sensitive benthic areas, and thus for the sustainable management of fisheries.

Further, Canada has participated in the development of international instruments that describe the need to establish effective fishery monitoring and catch reporting, such as the FAO Code of Conduct for Responsible Fisheries (1995) and UN Resolution 68/71 on Sustainable Fisheries (December 2013) and is a signatory to international agreements that create obligations in this regard, either directly or through conservation and management measures of the relevant regional fisheries organization established under the agreement. These include the 1995 UN Fish Stocks Agreement, the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, the International Convention for the Conservation of Atlantic Tuna, the Convention on the Conservation and Management of High Migratory Fish Stocks in the Western and Central Pacific Ocean, the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean and the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean.
2.0 What is fishery monitoring?

Fishery monitoring encompasses the set of field and desktop activities established in commercial, recreational and Indigenous fisheries that allow regulators and others to collect information on a fishery and its catches, and observe and examine the fishery and its dynamics. This type of monitoring is separate from science surveys that are independent from the fishery.

Fishery monitoring activity in Canada generally falls under two categories:

- **fisher-dependent methods** at-sea and dockside, such as logbooks, hail-ins, hail-outs, sales slips, and creel surveys;
- **fisher-independent methods** at-sea and dockside, such as aerial and land surveillance, designated at-sea observers, onboard cameras and vessel monitoring systems, and designated dockside observers.

In addition, catch information may be collected at sea or dockside by fish harvester groups or community organizations, which are not designated service providers. These do not replace designated observers if required by license conditions. Depending on the level of independence, such methods may be considered fisher-dependent.

Fishery monitoring activities may also include the auditing of collected data for accuracy and completeness, biological sampling requirements, summarizing and analyzing catch data and other fisheries data, and communicating catch estimates and other information within Fisheries and Oceans Canada (DFO), to harvesters and to the public. DFO staff, such as fishery officers, fishery managers, biologists and scientists, may also conduct fishery monitoring activities.¹

Data collected through fishery monitoring can include catch data², such as the quantity of retained and non-retained fish (e.g. target catch species and discarded bycatch species), and the biological characteristics of the catch (e.g. species, length, weight, sex and other attributes). Information collected can also include data on the location and timing of a fishery, effort, method of fishing, the fishery’s impacts on the ecosystem and habitat, and data necessary for enforcement of catch reporting requirements set out in license conditions, regulations or legislation. Indigenous Traditional Knowledge² may also be a source of fisheries monitoring information.

3.0 Why is fishery monitoring important?

Estimating catches for science (e.g. for stock assessment needs) and fishery management purposes, and ensuring compliance with established limits, such as the total allowable catch, are central to ensuring that fisheries are managed sustainably. Fishery managers may need to know catch quantities, the location, timing, and method of fishing, and to understand the fishery’s impacts on the target stocks, bycatch, habitat and ecosystems. This information is also needed to carry out compliance and enforcement activities.

Internationally there is an increased focus on improving fishery monitoring to implement an ecosystem approach to sustainable fisheries management. As such, in addition to data on target stocks, data

¹ Annex 1 provides a general overview of fishery monitoring methods used in Canadian waters.
² See glossary for definition.
requirements now also encompass bycatch of non-target fish, seabirds, sea turtles, and marine mammals. This information is also necessary to demonstrate to trading partners that Canadian fish in the marketplace have been harvested consistent with conservation goals and have not been obtained through illegal, unreported or unregulated (IUU) fishing.

For the commercial sector, fishery monitoring information has become increasingly important for market access to demonstrate that fish are sustainability sourced. In addition, for the recreational sector, appropriate fishery monitoring can help demonstrate the economic value of the sector.

4.0 Scope

The Policy applies to all commercial, recreational and Indigenous wild capture fishing activities in Canadian fisheries waters, including those freshwater fisheries managed by DFO under the Fisheries Act. It also applies to fisheries licensed and/or managed by DFO that operate outside of Canada’s Exclusive Economic Zone.

Decisions flowing from the application of this policy will be subject to the Fisheries Act and its regulations as well as other departmental policies. These decisions must also respect the rights of Indigenous peoples of Canada recognized and affirmed by section 35 of the Constitution Act, 1982, including those through land claims agreements.

5.0 Authorities

This Policy is guided by the legal and policy framework designed to deliver the management of Canada’s fisheries and oceans resources, including the Fisheries Act, the Oceans Act, the Species at Risk Act and associated regulations. The legislation and regulations provide the authority to apply this Policy.

Section 61 of the Fisheries Act provides that fish harvesters may be required to keep records of their catches and fishing efforts and convey them to DFO. The information collected may include the numbers of fish, sex, size, weight, other non-target species caught (retained and non-retained), the time and place at which any fish was caught or landed, as well as any other matter relating to the proper management and control of fisheries or the conservation and protection of fish.

Section 39 of the Fisheries (General) Regulations gives the Minister the authority to designate observers. Section 46-47 of the Fisheries (General) Regulations stipulates a vessel master’s responsibilities to assist observers.

Requirements to report specific information related to catch, fishing activity and monitoring, which are identified through application of this Policy, will be set out in license conditions imposed pursuant to the authorities under section 22 of the Fisheries (General) Regulations. If licence holders do not provide this information as specified, the Minister may withhold issuing licence documents until such time as the reporting requirements are met.

6.0 Policy Objectives

The Policy has four objectives:
1. to have dependable, timely and accessible fishery information necessary to help ensure that Canadian fisheries are managed in a manner that supports the sustainable harvest of aquatic species;
2. to have dependable, timely and accessible fishery information necessary to carry out enforcement activities to ensure compliance with the Fisheries Act, the Oceans Act, the Species at Risk Act and regulations;
3. to have a consistent approach to establishing fishery monitoring requirements across fisheries, by following a standard set of action steps;
4. to obtain information on effort, total catch (retained and non-retained) and other ecosystem components, as required.

To achieve these policy objectives, fishery monitoring programs must have fishery-specific monitoring objectives aimed at collecting the required data, with an acceptable level of dependability, timeliness, and accessibility. These terms are defined as follows:

**Dependable**
Dependability measures the ability of an estimate (e.g. estimated catch) to achieve its intended objective (e.g. do not exceed the Total Allowable Catch). Dependability is determined by data quality and the risk of failing to meet the objective. Data quality is directly related to accuracy / bias, in that quality is higher where less bias is present in the data. It is directly related to precision / variance, in that quality is higher where less variability is present in the data. From a risk perspective, the closer catches are to the TAC, the higher the risk. Higher risk means lower dependability, regardless of the data quality. See the Glossary (section 11) for a more fulsome explanation of dependability and how it relates to quality and risk.

**Dependability and Risk**
The Policy measures the effectiveness of monitoring programs primarily by considering dependability. In cases where monitoring programs are of low dependability, managers might look at risk, and consider changes to catch limits or fisheries management measures to reduce the risk, thereby increasing the dependability of the estimates achieved through existing monitoring programs.

**Dependability and Estimate Accuracy**
Alternatively, managers could decide to keep the risk profile intact and increase dependability by investing in data accuracy. Ensuring independent verification by deploying designated at-sea observers is one way to mitigate data accuracy / bias. Cross checking potentially biased data sets (e.g. self-reported catches) against independent data sets (e.g. from video monitoring systems) is another. In the absence of these or other means to validate and verify catches, estimates derived from suspect data need to consider and incorporate corrections for assumed biases for under- or over-reporting. This makes such estimates less accurate, and therefore less dependable. See the Glossary (section 11) for more details on independent verification.

**Dependability and Estimate Precision**
Managers may identify an opportunity to improve data precision by adjusting the data collection program. Having a proper sample design for collecting data is key. Catch estimates based upon a census (i.e. 100% coverage) cover the entire statistical population and are usually highly dependable.
More often, however, catch estimates are based on a survey (i.e. partial coverage), where a sample of the statistical population is observed. In such cases, data collection should use a proper statistical sampling protocol. This will enhance data quality by increasing precision and accuracy, making estimates derived from the sample data more dependable.

Timely
Timely means that data from fishery monitoring programs is available within the timelines agreed upon by fish harvesters, DFO Science, DFO Fisheries Management, and DFO Conservation and Protection, or other DFO sectors who need the data for annual, seasonal or topical analyses to review monitoring coverage, or to feed into stock assessments. With quota decisions, timeliness can mean minimizing the time lag between the collection and analysis of data and the quota period, so that quota decisions are based on recent data. This is especially important for short-lived species whose abundance fluctuates from year to year.

Accessible
Accessible means the data is readily available in a form that can be used by those who require the data. Robust information management systems to collect, analyze, store and share fishery information are essential to deliver effective fishery monitoring programs. The data should be in a consistent, standardized package that enables various kinds of data to be integrated and aggregated at different scales (e.g. at the stock, fishery, and regional scale, depending on the nature and extent of the issue), to allow for cross-fishery and other comparisons or analyses.

7.0 Policy Principles

Fishery monitoring in each individual fishery shall be guided by the following three principles.

Principle 1: The levels and frequency of fishery monitoring should respond to the degree of risk associated with the fishery and the complexity of the fishery.

While an objective of this Policy is to have monitoring requirements that are consistent across fisheries, this does not mean that monitoring requirements will be the same in individual fisheries. Monitoring requirements will depend on a number of factors such as the fishery’s monitoring objectives, the risks the fishery may pose, the fishery’s complexity, and the required dependability and quality of the data.

For an individual fishery, risk can refer to the degree of impact the fishery has on conservation and compliance parameters of concern, such as the impact of the fishery’s activities on the population size of the target species and the population size of species intercepted as bycatch.

A complex fishery with higher conservation and compliance risks should have types and levels of monitoring that allow estimates of greater dependability to be made from the data collected via the fishery monitoring program.

Fishery characteristics that increase complexity include but are not limited to the number of stocks or species targeted and intercepted by the fishery, trip length, and at-sea processing. In addition, certain management regimes such as the Individual Transferable Quota (ITQ) system may require more timely monitoring.
Principle 2: A fishery monitoring program should be designed to achieve the fishery and policy objectives, and take into account cost-effectiveness and practicality of implementation.

Fishery monitoring programs should ensure that the information requirements are achieved as cost-effectively as possible. A fishery monitoring program should balance rigour, affordability and practicality of implementation. While cost-effectiveness is a key consideration when developing a fishery monitoring program, the program should always provide enough rigour to achieve the policy and fishery objectives.

To promote cost-effective fishery monitoring, this Policy encourages the use of new technologies for collecting fisheries data, such as electronic logbooks and video monitoring systems.

Where a fleet is not willing or not able to pay for monitoring needed to meet the fishery and policy objectives, all alternatives must be explored consistent with the precautionary approach in order to achieve these objectives, including a more conservative management regime.

Principle 3: Shared Accountability and Responsibility

Traditional top-down management approaches have not given fish harvesters much say in the policies governing their activities. This has not encouraged harvesters to accept responsibility for the outcomes of fisheries management decisions or to supply the data required by resource managers to ensure the sustainable use of fisheries resources (AFPR, 2004).

DFO is responsible for the effective management and control of fisheries, and will retain responsibility for oversight of the fishery monitoring program, including compiling, analyzing and auditing catch estimates and related information, integrating it into established databases, and publicly reporting the data as required. DFO is also responsible to ensure that the fishery monitoring programs will only collect data necessary to meet the objectives for which it is intended.

Fish harvesters are individually and collectively responsible for complying with management regimes and controls, and sharing the costs of fishery monitoring activities (see section 8.0). Fishery monitoring requirements will be applied equitably to all harvesters within a fishery. If a fishery is operated by multiple fleets, fishery monitoring requirements for each fleet should be proportional to the risk the fleet poses to the target species, bycatch species, other key species, habitat and other ecosystem components. The Policy envisions DFO working with fish harvesters on key aspects of policy implementation including assessing the existing monitoring program, establishing the monitoring objectives, designing the monitoring program, and advising of changing risk profiles.

8.0 Fishery Monitoring Program Costs – Responsibilities

Licensed fish harvesters are required to report fisheries data to DFO as set out in their licence conditions. All harvesting groups must fulfill their roles in data provision and meeting identified compliance levels to ensure appropriate management of the fishery and continued access to the fishery resources. Everyone involved in fishery monitoring — fish harvesters, DFO and service providers and observers—must be committed to providing dependable, timely and accessible fisheries information.

The responsibility to pay for catch reporting and monitoring is currently shared between DFO and the fishing industry. This is in accordance with established cost sharing arrangements that are expected to
continue going forward. Specifically, with respect to departmental costs, DFO is responsible for the following:

- internal administration costs related to the dockside monitoring and at-sea observer programs;
- operating costs for fishery surveillance;
- planning, directing, analyzing and reporting related to the science program;
- preparation and publication of domestic and international fishery reporting;
- support for monitoring in Food, Social and Ceremonial fisheries and;
- support for funding recreational fishery monitoring and catch reporting in tidal water and non-tidal salmon fisheries.

The commercial sector is responsible for all costs associated with the catch reporting and monitoring requirements to support their monitoring programs, including Dockside Monitoring and At-Sea Observer programs, as well as the following activities:

- collecting, recording and communicating required fishery data;
- making catch, vessels and holds safe and accessible to monitors and/or observers;
- procuring Vessel Monitoring Systems (VMS) and other necessary fishery monitoring equipment;
- training, deploying, and paying monitoring personnel;
- overseeing monitoring programs, contracts with service providers, and maintaining certification for monitoring personnel.

The assessment of a monitoring program may identify the need to strengthen some aspect of a catch monitoring and reporting program. For the commercial sector, the resulting costs will be borne in accordance with the above roles and responsibilities, with industry paying for activities that fall under their responsibility and the same for DFO.

With respect to the recreational sector, DFO covers costs associated with the collection of information on the catch and release of fish and the monitoring of recreational fisheries. DFO will continue to provide this support to the extent it is able. The recreational fisheries sector contributes to some aspects of catch reporting. For example, electronic log book functionality is now available to recreational fishing guides via the FishingBC app for Android and Apple devices, jointly funded by the Sport Fishing Institute and DFO. In Atlantic Canada, the recreational shark derby is supported by a Dockside Monitoring program funded by the recreational sector. However, in cases where there is a high risk of undesirable impacts to fish resources, and additional investments are needed beyond the status quo, DFO may explore means by which the recreational sector can contribute to these additional costs.

Through DFO’s Indigenous programs, especially the Aboriginal Fisheries Strategy, Indigenous groups have been able to access funding to build long-term capacity to participate in fisheries management, including catch monitoring activities. These permanent programs are currently being renewed in collaboration with Indigenous groups.

Over time, all harvesters will be expected to pay their share of costs associated with the monitoring requirements for their fisheries.
9.0 Implementation of the Policy

To implement the Policy, DFO will develop annual fishery monitoring work plans that outline national and regional priority actions and associated timelines. These annual work plans will be updated with new priorities each fiscal year. This Policy will be implemented through the IFMP process or through other fishery planning processes. The monitoring requirements for a fishery will be included in the fishery’s license conditions.

The accompanying document, *Steps to Implement the Fishery Monitoring Policy*, provides detailed guidance on how to achieve the policy objectives. Implementing the steps will help ensure that a consistent method is followed to determine the monitoring needs in a fishery that reflects the risk level posed by the fishery. DFO may develop additional instruments to implement this Policy.

DFO will implement this Policy consistent with the National Dockside Monitoring Program policies and procedures and the At-Sea Observer Program Corporation Designation Policies. These policies serve to operationalize at-sea observer and dockside monitoring requirements and outline the designation process and other requirements of these programs. A diagram illustrating the relationship between the Departmental policies relating to fishery monitoring can be found in Annex 2.

10.0 Performance measurement

At the national level, DFO will track the progress to implement the Policy by using the annual *Sustainability Survey for Fisheries*.

At the fishery level, DFO will evaluate fishery-specific monitoring programs against the monitoring objectives, in accordance with Step 6 of the *Steps to Implement the Fishery Monitoring Policy* Document, as part of the annual post-season review process. This might require that assessments of conservation risk, compliance risk, and/or data dependability be revisited in response to changes in stock, environmental conditions, fishing method, monitoring method, or improved knowledge of the risks.

Over the long term (every 3 to 5 years), DFO will develop metrics to evaluate whether the policy objectives have been achieved in individual fisheries. For example, has the dependability and quality of the data collected from the fishery been examined and shown to be adequate to achieve the objectives for the fishery.

11.0 Glossary

**Accessible**: Ease with which information can be obtained (Treasury Board Secretariat, 2016). Specifically, information should be readily available to Fishery Managers and DFO Scientists who use the data for the management of the fishery. In tandem with being *Timely* and *Dependable*, ensuring information is

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available with minimal difficulty is one of the three core principles management should strive for when developing fishery monitoring data systems.

**At-Sea Observer Program Corporation Designation Policy and National Dockside Monitoring Program Policy:** The Fishery Monitoring Policy ensures a standard approach to establishing reporting requirements and fishery monitoring levels in all fisheries managed by the Department. However, the actual administration of fisheries monitoring is conducted by DFO’s Conservation and Protection branch, through their At-Sea Observer and the National Dockside Monitoring programs. Canada's At-Sea Observer Program places designated private-sector observers aboard fishing vessels to: monitor fishing activities; collect catch data and other fisheries data (location, vessel, gear, etc.); and monitor industry compliance with fishing regulations and licence conditions. The Department has standards in place to designate individual at-sea observers and corporations seeking to provide at-sea observer services. The Dockside Monitoring Program provides accurate, timely, third-party verification of fish landings. It is the primary and, in some areas, the only source of landings data. A list of corporations qualified by the Canadian General Standards Board and designated by DFO is available.

**Bycatch:**

A) retained catch that includes species, and specimens of the target species, such as specimens of a particular sex, size or condition, that the harvester is not licensed to direct for but may or must retain; and,

B) all non-retained catch, including catch released from gear and entanglements, whether alive, injured or dead, and whether of the target species or the non-target species. (DFO, 2013)

**Catch:** Catch can be divided into two categories: retained catch, which is the portion of the catch that is retained for use, and non-retained catch, which is the portion of the catch that is returned to the water. The retained catch includes landed catch as well as catch that is used in some way but not landed. Non-retained catch includes catch released from the gear before being hauled on board the vessel, such as catch slipped from a purse seine, and catch that becomes visibly entangled in the fishing gear, such as entangled whales, birds and sea turtles. Further details are provided by “Guidance on Implementation of the Policy on Managing Bycatch”. (DFO, 2013)

**Catch data:** Catch data is collected at time of harvest, by fish harvesters, at-sea observers, or via electronic monitoring, and can include the following kinds of data:

- Target stock quantity, e.g. number and/or weight of target species retained and discarded
- Target stock biological characteristics, e.g. stock, age, sex, length/weight, flesh colour, marks/tags
- Bycatch and Ecosystem impacts, e.g. quantity of bycatch, retained and discarded, condition of releases, size, sex, age, length

Information needed for scientific stock assessments, species life history characteristics, fishery objectives, and other considerations will dictate what catch data is relevant to the management of a fishery. Fisheries specific requirements for catch data are set out in licence conditions and in procedural documents, e.g. conservation harvesting plans. This definition of catch data does not include effort data (vessel counts, gear inventory, etc.) or vessel location data. This type of data may also be collected as part of a monitoring program and paired with catch data, for example, recording where catches occurred in a fishing area.

**Commercial, in relation to a fishery:** Fish is harvested under the authority of a license for the purpose of sale, trade, or barter. (*Fisheries Act, Subsection 2(1)*)
**Conservation:** The protection, maintenance, and rehabilitation of genetic diversity, species, and ecosystems to sustain biodiversity and the continuance of evolutionary and natural production processes. (DFO, 2005)

**Dependability:** Describes the ability of the estimation process to help reach the objective for which it is to be used. Quality describes how well the parameter estimation process (e.g. estimated landings) estimates the quantity of interest (e.g. actual landings). Quality is about accuracy and precision and is not synonymous with dependability, which is tied to the objective.

Consider the following fisheries objective, “maintaining harvests at or below the Total Allowable Catch”, and a relevant parameter, such as the target species catch. The method used to collect and evaluate catch data and the resulting catch estimates are highly dependable if they give managers confidence that total allowable catch (TAC) is not being exceeded. This becomes more challenging as the TAC is approached. Dependability of catch data and catch estimates is thus driven by risk (e.g. risk of exceeding the TAC), which will depend in turn on the size of the TAC, the fishery’s exploitation rate and additional factors such as complexity of the management regime (e.g. transferable quotas).

**Electronic Monitoring:** Technology installed on a vessel to monitor compliance of fishing operations. This includes technology such as the Vessel Monitoring System (VMS) and Video Monitoring. Objectives for the use of electronic monitoring include reducing operational costs, substituting the presence of at-sea fisheries observers, and/or improving the dependability of the data.

**Ecosystem approach to fisheries management:** An ecosystem approach requires that fisheries management decisions consider the impact of the fishery not only on the target species, but also on non-target species, seafloor habitats, and the ecosystems of which these species are a part. This approach also requires that management decisions take into account changes in the ecosystem which may affect the species being fished. This includes the effects of weather and climate, and the interactions of target fish stocks with predators, competitors, and prey species.

**Fishery:** A broad term that can be defined by fleet (e.g. inshore, offshore), sector (e.g. commercial, recreational), target species, species groups (e.g. finfish, shellfish), methods (e.g. mobile gear, fixed gear), timing (e.g. opening date, fall fishery), or by location (e.g. the area where a fishing appliance is used). The Policy requires participants to assess monitoring programs based on a unit of assessment, i.e. a fishery or fishery sub-unit. Existing advisory processes may have already established the most appropriate or practical “units” for discussing management issues like fisheries monitoring e.g. harvesters with particular licenses fishing in defined areas using the same gear.

**Fishing effort:** The amount of fishing gear of a specific type used on the fishing grounds over a given unit of time, for example hours trawled per day, number of hooks set per day or number of hauls of a beach seine per day. When two or more kinds of gear are used, the respective efforts must be adjusted to some standard type before being added. (FAO, 1997)

**Independent Verification:** Verification and Validation are procedures used to check that a system meets the specifications and requirements to fulfill its intended purpose. Independent Verification means that verification and validation are performed by an arms-length 3rd party. In catch reporting there are often incentives to under-report (to hide catches in excess of legal quotas) or to over-report (in anticipation of allocation decisions based on past catches). DFO may designate observer corporations for the collection
of catch data, ensuring they do not have a commercial relationship with the harvesters. These organizations must be designated by DFO and have a quality management system in place.

There may be ways to validate catch information without using designated observer corporations. Combining two unconnected monitoring tools, e.g. cross referencing self-reported data against data from a video monitoring system, is one example.

**Precautionary Approach (PA):** The Precautionary Approach is a general philosophy to managing threats of serious or irreversible harm where there is scientific uncertainty. The application of precaution requires increased risk avoidance where there is risk of serious harm and uncertainty is great. The precautionary approach in fisheries management is about being cautious when scientific information is uncertain, unreliable or inadequate and not using the absence of adequate scientific information as a reason to postpone or fail to take action to avoid serious harm to the resource.

**Non-retained catch:** consists of any species or specimens that are not retained for use and that are returned to the water. The returned catch may be alive, injured or dead. This includes catch brought on board and thrown back, catch released from gear before it is brought on board (such as catch released from a purse seine before the seine is fully pursed), and catch that becomes visibly entangled in fishing gear, such as entangled whales, birds and sea turtles. This does not include catch that escaped the fishing gear, that was removed by predators and scavengers, or that dropped out of the gear, dead. (DFO, 2013)

**Retained catch:** the portion of the catch that is retained for use. This includes landed catch as well as catch that is used in some way but not landed, such as catch that is used for bait. (DFO, 2013)

**Sustainable Use:** The use of resources in a way and at a rate that does not lead to their long-term decline, thereby maintaining the potential for future generations to meet their needs and aspirations. Sustainable use refers to consumptive uses of biological resources. (DFO, 2005)

**Target catch:** retained catch that consists of the species that the harvester is licensed to direct for, in other words, the target species of the fishery. In a multispecies fishery, this includes any species that the license holder is licensed to direct for on a given fishing trip regardless of whether the license holder did so or not. (DFO, 2013)

**Third party monitoring:** monitoring performed by a person or group besides those primarily involved in the fishing.
12.0 References


Annex 1: Examples of Fishery Monitoring data collection methods.

What is fishery monitoring?

At-Sea Data Collection
- Catch and discards (numbers, conditions)
- Protected species interactions
- Fishing location and effort
- Collection of biological samples

Dockside Data Collection
- Landings
- Verification of weights/amounts
- Collection of biological samples

Fisher-Dependent
- Fisher Hall-Ins/Hail outs
- Logbooks
- Fisher collected biological samples
- App to report on catches

Technology Options
- E-hails
- E-logs

Fisher-Independent
- At-sea observers
- Fishing audits
- Aerial gear counts (overflights)

Technology Options
- VMS
- Electronic video monitoring

Fisher-Dependent
- Hails
- Reports from recreational harvesters
- Creel surveys
- Telephone surveys

Technology Options
- E-hails

Fisher-Independent
- Dockside monitoring
- Port Sampling
- Plant audits

Technology Options
- Electronic landing reports
Annex 2: How does the Policy relate to existing policies and programs on fishery monitoring?

Sustainable Fisheries Framework policies

Fisheries Monitoring Policy
- Outlines an approach to establish reporting and monitoring requirements (methods and levels) in a fishery to collect data that will provide the data needed to meet specific objectives

The policy will be implemented via operational programs

- Electronic Logbooks (Elogs initiative/C&P)
- National Vessel Monitoring System (C&P)
- National Dockside Monitoring Program Policy and Procedures (C&P)
- At-Sea Observer Program Corporation Designation Policy (C&P)
- Science, Resource Management, Other
- Dockside Monitoring Program (DMP) (C&P)
- At-Sea Observer Program (ASOP) (C&P)