APPENDIX B
ENFORCEMENT AND AUDIT OPPORTUNITIES WITH TRACEABILITY SUPPORTING SUSTAINABLE FISHING

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It is estimated that about 30% of the global fisheries catch comes from illegal, unreported and unregulated (IUU) fisheries (REF). The growth of IUU fisheries is considered to be one of the greatest threats to global fish stocks and the development of sustainable fisheries. In March 2005, Canada released a national plan of action on IUU fishing (http://www.dfo-mpo.gc.ca/misc/npoa-iuu_e.htm) including implementation of internationally agreed market related measures aimed at identifying illegal or unreported fish products in the marketplace. Many of these measures require elements of product traceability.

Illegal fish products come from the following sources:

1. Unlicensed individuals catching and selling fish products to processors or through private sales and exporting out of the province and the country.
2. Licensed commercial fishers fishing during a closed time and selling their catch as caught in a legitimate fishery.
3. Licensed commercial fishers fishing during an open time and failing to report their catch through a landing station (DMP) or through a processing plant (Sales Slip).
4. Licensed commercial fishers fishing during an open time but not fishing in an area that is open and selling their catch as legitimately caught fish from the open area.
5. Fish taken from a contaminated area and sold into a legitimate commercial fishery and or mixed with legally taken product.
6. Individuals exceeding their ITQ or IVQ.
7. First Nation Food Social and Ceremonial fish (FSCF) mixed with commercial catches.
8. Illegal harvest laundered through aquaculture sites.
9. Mixing of prohibited species with legal species.
10. Mixing of undersize product with legal product.
11. Canadian caught product declared as foreign product and processed as such.
12. Illegal harvest laundered through processing plants and exported utilizing duplicate manifest from previously exported legitimate fish products.

In British Columbia illegal and unreported catch has been and continues to be an important fisheries sustainability issue. Although commercial, recreational and First Nation harvest of abalone has been closed since 1991, illegal poaching continues to be a major impediment to stock recovery (REF 1999). Illegal and unreported harvest is also a concern in highly valued fisheries such a geoduck and it is generally acknowledged that the illegal catch and sales of salmon is considerable but impossible to estimate due, in part, to the lack of verifiable information on the amount of legal catch and the inability to trace product in the marketplace to its source.

Enforcement officers can use sales slip and logbook information to assist in verifying the legitimacy of fish products. However, not all the information needed to validate a load of fish can be obtained from a sales slip or logbook. For an enforcement officer to be able to verify that

fish have been caught within a legitimate fishery, the following basic information on the product is important:

1. The name of the commercial fisher, phone number and address.
2. The name of the commercial fishing vessel.
3. The commercial fishing vessel registration number.
4. The type of validation tab issued to the vessel.
5. The Management area, Sub area fished.
6. The date the fish were caught.
7. The method the fish were caught by.
8. The species of fish caught.
9. The quantity of fish caught, by pieces and or pounds.
10. The place where the fish were landed.
11. The name of the packer vessel used to transport the fish from the fishing grounds to the landing port and its skipper name, phone number and address.
12. The name of the truck transporting company, phone number and address who transported the fish from the landing port to the processing plant and or boarder crossing and the name(s) of the driver(s) of the truck(s) used to transport the fish and their phone number and address.

Prior to 1991, Department of Fisheries and Oceans Canada (DFO) Fishery Officers were heavily involved in the on grounds management and enforcement of fisheries on the Pacific Coast, particularly salmon and herring. Small vessel patrols, Canadian Coast Guard grey fleet and air coverage provided platforms from which Fishery Officers conducted enforcement and collected fleet size and hail catch information which were radioed to fishery managers to estimate the total catch for the fishery. After the fishery was closed, hand written sales slips were physically collected by Fishery Officers from packers on the fishing grounds and from processing plants and the data used to verify the estimated catch for the fishery. Data adjustments were made and management decisions finalized for the next fishery and the expected escapement of the run of fish. Fishery Officers relied on these sales slips (or lack there of) to identify illegally harvested fish. Officers checked for false information on sales slip such as wrong area of capture, wrong species for the fishery, wrong date of capture, etc or observed inconsistencies in the condition of totes of fish with other fish from the same fishery or with the condition of the fish and the date of capture reported on the sales slip. These inconsistencies led officers to conduct further investigations to verify if the fish had or had not been taken legally.

Today Fisheries Officers lack the resources and staff to act on the grounds as formerly and fishery managers are attempting to manage fisheries with real time data utilizing cell phone and satellite technology along with GPS tracking devices and computers. In an attempt to collect more management data fishers are being required to hail out before fishing and hail in before leaving the fishing grounds and or landing fish. They are required to provide documentary information in a timely manner. This information is being collected (depending on the fishery) by at sea observers, fisher hails, logbook reports, sales slips and dockside monitors. Sales slips, which Fishery Officers relied on for catch verification, are becoming less relevant. The data is time consuming to enter and often duplicates the logbook and dockside monitoring information. Fishery Officers no longer collect the sales slips and fishers knowing this may not use them.

Officers today are relying more on logbook data, but this information is often not verifiable nor available at processing plants.

Dockside Monitoring Programs and At Sea Observer Programs for some fisheries (many of which are individual quota fisheries or IQ), along with designated ports of landing and hail-in and hail-out information, have made the monitoring and validation of fish products at processing plants, fish stores, restaurants and export locations easier for Fishery Officers. For non-IQ fisheries, such as salmon, current monitoring and validation of landings of fish are more difficult. Failure by fishers, processing plants and cold storage facilities to fill out sales slip information and the lack of the requirement to track and identify logistic units of fish products within a processing plant makes it very difficult for Fishery Officers to prove the origin of fish products processed and or stored at these locations. In the case of under size product and the possession of prohibited species, the individual or company in possession may be charged for illegal possession, however, this may not lead to charging the one who caught the fish in the first place due to lack of traceability of the product from the fisher to the processor.

The introduction of a traceability program using unique product identifiers, such as bar codes, will enable consumers to know where and how fish products were caught and or were farmed. Traceability will also provide regulatory agencies such as Fisheries and Oceans Canada (DFO) a huge opportunity to improve on how they carry out fisheries enforcement by enhancing their ability to verify the legitimacy of inspected fish products in a timely and efficient manner. The new networking technologies available today along with product identifier data (e.g. bar codes) will make these task easier to perform and in a more timely manner.

The storage of catch, transportation, processing, sales and export data by fishers, packers, off-loaders, transporters and processors provides the opportunity, with the new wireless networking technology, to access all relevant information in a timely manner to audit data to ensure compliance with fisheries plans and prevent the introduction of illegally harvested fish into the lawful market. This audit process will also assure those in world trade markets that Canada's intent and obligations with respect to IUU catch are being adhered to.

Auditors will be able to follow harvested fish from the capture vessel to the transporter, to the processor to cold storage and to the export market as well as sales of fish to local restaurants and fish stores.

A traceability program incorporates one-up and one-down transfer of information. As this information will already be transferred from one business to another, businesses could also passing on the same information to DFO or any other regulatory authority. Alternatively the regulatory authority can be granted access, with proper security controls, to the information via internet portals. Auditors within DFO would verify landings against commercial fishing openings, hails from fishing vessels, and ensure that product into a processing plant would equal product leaving a processing plant. A regulator such as DFO would be able to track all fish from the place of capture to the consumer while ensuring illegally caught fish are not entering the system.

Field Fishery Officers would, through random inspections, collect product identifier information (e.g. bar code data) at places of inspection. They would carry out random inspections of the

contents of boxes, containers and totes to ensure that the product contained in these items are indeed the product and quantity of product identified by the bar code.

While traceability will not be a foolproof way of preventing IUU product from entering the legal seafood supply chain, it should greatly reduce the ability of illegal operators to process and ship large and sustained quantities of illegal product to both domestic and export markets (ref to salmon catch accounting crisis inset box).