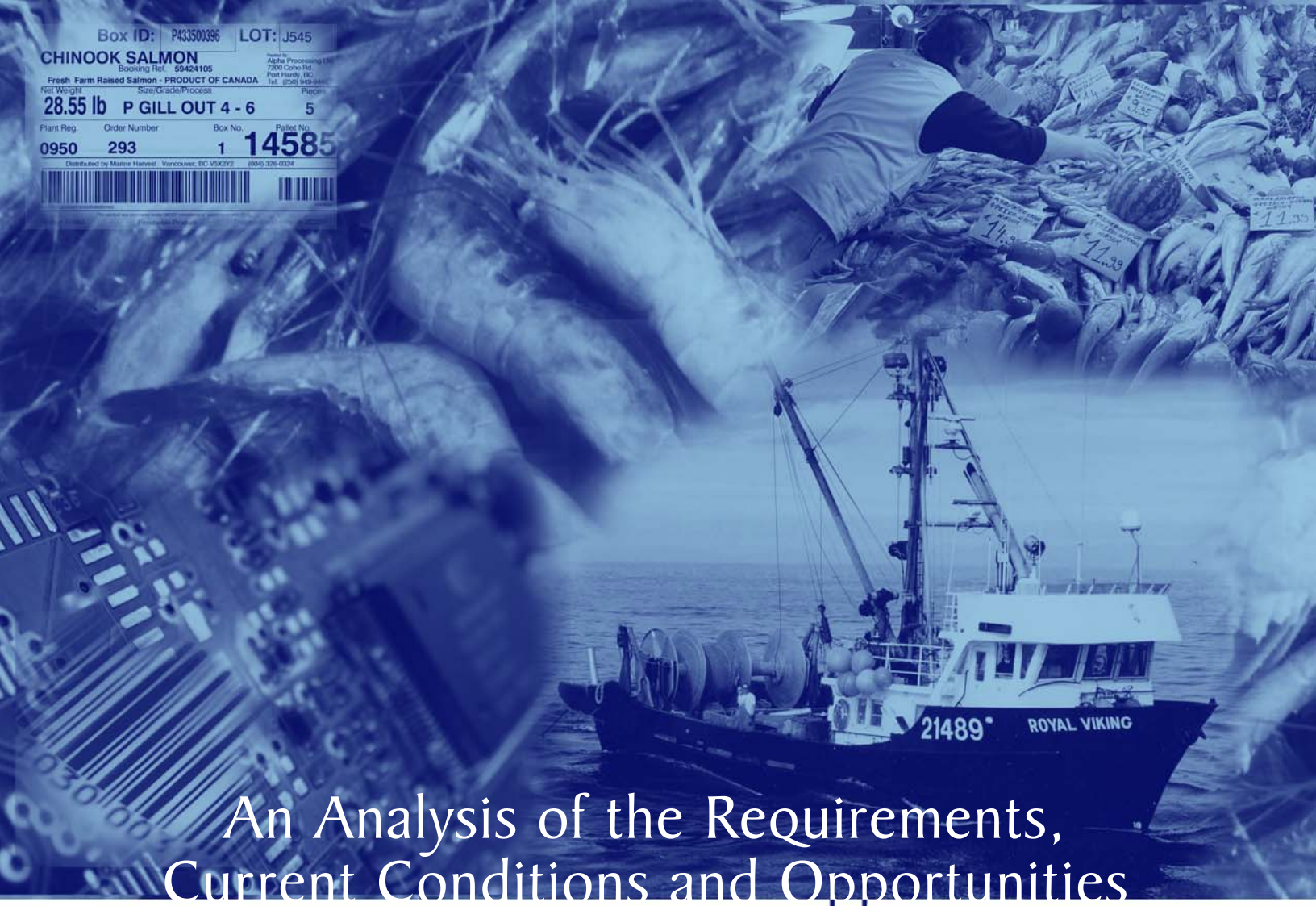

An Analysis of the Requirements, Current Conditions and Opportunities for Traceability in the British Columbia Seafood Sector

Assessing the State of Readiness

Final Report

June 2005

ARCHIPELAGO
MARINE RESEARCH LTD.

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ASSESSING THE STATE OF READINESS

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1.0 PROJECT RATIONALE

1.1 PROJECT SCOPE AND OBJECTIVES

Information requirements over the seafood industry supply chain are growing and diversifying. These traceability requirements result from a number of regulatory and non-regulatory requirements such as:

1. **Food Safety** – Canadian Food Inspection Agencies Programs including HACCP requirements;
2. **Access to International Markets** – EU General Food Law Regulations, US Country of Origin Labelling (COOL), US Bioterrorism Regulations;
3. **Consumer Driven Seafood Choice Initiatives** – Marine Stewardship Certification, "BC Wild", Seafood Choices Alliance "Fish List".

A number of initiatives have been undertaken nationally and internationally to address traceability information requirements for the seafood industry. In the European Union, guidelines for an information management system (Tracefish) have been developed to assist the seafood industry in addressing upcoming EU General Food Law regulations. In Canada common standards to facilitate supply chain traceability for the food industry are being developed by Can-Trace, an industry-led initiative comprised mainly of commodity producing organizations and food industry wholesalers and retailers. Both these initiatives focus on use of a systematic data management system based on the EAN.UCC[1] standards (including bar codes) to trace food products through the supply chain.

Traceability regulations require information from the "water to buyer" component of the seafood supply chain. However, there is considerable uncertainty and lack of clarity about the specific information required from harvesters and how this information will be incorporated into proposed traceability protocols. This uncertainty exists, in part, because most existing and developing QMP and product tracing processes (with the exception of bivalves) address tracing product after it has entered the processing facility. In addition, with some notable exceptions, harvesters are often poorly connected to the seafood supply chain, with less priority being placed on product quality and communication (GSGislasson, 2004)

Can-Trace (2004) points out that the seafood industry faces three major questions:

1. What information to collect, keep and share?
2. How should this information be stored to meet demands (including timeliness) of customers and regulators?
3. How to collect and store information in a cost effective manner?

These three challenges apply to the seafood production sector (both capture and aquaculture). In British Columbia the amount and quality of data collected in different capture fisheries varies significantly. Fisheries operating under individual quota (IQ) management all have associated dockside monitoring programs, generally carried out by an independent, third party entity. The information collected varies but usually includes catch, landings, fishing area, beginning and end date of fishing operation, offload date and identification of primary processor. This information

[1] European Article Numbering and the Uniform Code Council

is collected to manage the individual quota system as well as to provide data for fisheries management and enforcement purposes. Non- IQ fisheries generally use less comprehensive and verifiable information systems such as fishing hails, catch logs and sales slips to collect fisheries-dependent data for fisheries management purposes. These programs contain many (and possibly all) of the essential data requirements for the traceability regulations outlined above but, to date, there has not been a systematic assessment for each fishery to determine if traceability requirements are being met. In addition the ability of current data management (storage and access) systems to meet regulatory and customer demands has not been assessed.

The aquaculture industry is likely better positioned to meet upcoming traceability regulations, primarily because shellfish aquaculture (oysters, mussels, clams and scallops) already has strict "water to fork" traceability requirements to manage contaminant risk (sanitary and PSP). Industry standards within the salmon aquaculture industry require tracing feed and medication regimes for each lot of fish harvested. However a systematic assessment of traceability data requirements and current data management practices has also not been carried out for the aquaculture sector in British Columbia.

The specific objectives of the current project were to:

1. **Document data requirements for traceability**
   Summarize the fundamental data requirements of the various traceability initiatives anticipated to impact BC commercial fisheries and aquaculture in the foreseeable future (5-10 years).
2. **Compare with current fisheries information programs in British Columbia**
   Compare traceability data requirements with current fisheries management, enforcement and fish inspection information requirements for the major commercial fisheries in British Columbia (both IQ and non-IQ managed fisheries).
3. **Identify and address data gaps**
   Identify gaps in the existing data collection programs with respect to information requirements for traceability. Assess and recommend ways to address these data gaps, with particular focus on fisheries lacking dockside monitoring programs (i.e. salmon).
4. **Assess and recommend approaches to data management**
   Assess and recommend approaches and technologies for cost effective traceability data management (collection, storage and access).
5. **Address data harmonization**
   Assess the feasibility of using existing or evolving dockside or at-sea monitoring programs to meet traceability requirements in order to benefit from the cost effectiveness, efficiency and verifiability of an integrated system.

1.2 APPROACH AND REPORT STRUCTURE

This report is divided into four subsequent sections.

Section 2 summarizes traceability systems in practice, including paper and electronic data capture and storage, as well as existing traceability software packages. This information is drawn primarily from existing literature, web-based sources as well as personal interviews.

Section 3 presents the business case for traceability, providing regulatory and non-regulatory rationale for implementing traceability systems in seafood businesses. The information was drawn from traceability literature, interviews with the seafood processing sector as well as the recent SWOT report on the BC seafood industry.[2]

Section 4 provides the current conditions in the BC capture fishery and aquaculture sectors with respect to traceability requirements and includes:

- a summary of current BC seafood exports and trends taken primarily from Statistics Canada and BC Ministry of Agriculture, Fish and Food (MAFF);
- the seafood supply chain pathways in BC;
- an assessment of current and upcoming data requirements for the "water to buyer" component (harvester, transporter and first point of sale) of traceability as defined by EU regulations, COOL, US Bioterrorism Legislation;
- a sector specific (e.g. the halibut fishery) listing of harvest data collected by dockside validation programs, catch logs and sales slips;
- current traceability practices and issues at the processor level, addressed primarily by a series of interviews with buyers and processors exporting seafood products to key global markets;
- summary themes resulting from an analysis of data gaps between traceability regulation requirements and fisheries data requirements and issues identified from processor interviews.

Section 5 provides the summary State of Readiness Report for "Water to Buyer" traceability in the BC seafood sector. This section summarizes harvester, transporter and buyer/processor issues for the seafood industry as a whole as well as opportunities and constraints for IQ and non-IQ fisheries. State of Readiness report cards for the major capture fisheries as well as shellfish and finfish aquaculture are also provided. The report cards are intended to summarize the issues each sector will face in addressing traceability requirements given current fishing or aquaculture practices, major markets, existing data collection and storage regimes as well as the status of industry organization.

[2] GSGislason and Assoc. 2004 BC Seafood Sector and Tidal Water Rcreational Fishing: SWOT Assessment. Prepared for BC Min. of Agriculture, Food and Fisheries