IUU Risk Intelligence

Putting Compliance First

GLOBAL EVALUATION OF FISHERIES MONITORING CONTROL AND SURVEILLANCE IN 84 COUNTRIES

CANADA – COUNTRY REPORT

GANAPATHIRAJU PRAMOD

IUU RISK INTELLIGENCE

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SUMMARY

This evaluation of Fisheries Monitoring Control and Surveillance report for ***Canada*** *is one of 84 such country evaluations that covers nations landing 92% of world's fish catch. Using a wide range of interviews and in-country consultations with both military and civilian agencies, the report exemplifies the best attempt by the author(s) at evaluation of MCS compliance using 12 questions derived from international fisheries laws. The twelve questions are divided into two evaluation fields, (MCS Infrastructure and Inspections). Complete details of the methods and results of this global evaluation would be published shortly through IUU Risk Intelligence website.*

Over a five-year period, this global assessment has been subjected to several cross-checks from both regional and global MCS experts familiar with compliance aspects in the country concerned. Uncertainty in assigning each score is depicted explicitly through score range. However, the author(s) are aware that gaps may remain for some aspects. The lead author remains open at any time to comments, and revisions will be made upon submission of evidence where necessary. Throughout the report, extreme precaution has been taken to maintain confidentiality of individuals who were willing to share information but expressed an inclination to remain anonymous out of concern for their job security, and information from such sources was cited as 'anonymous' throughout the report.

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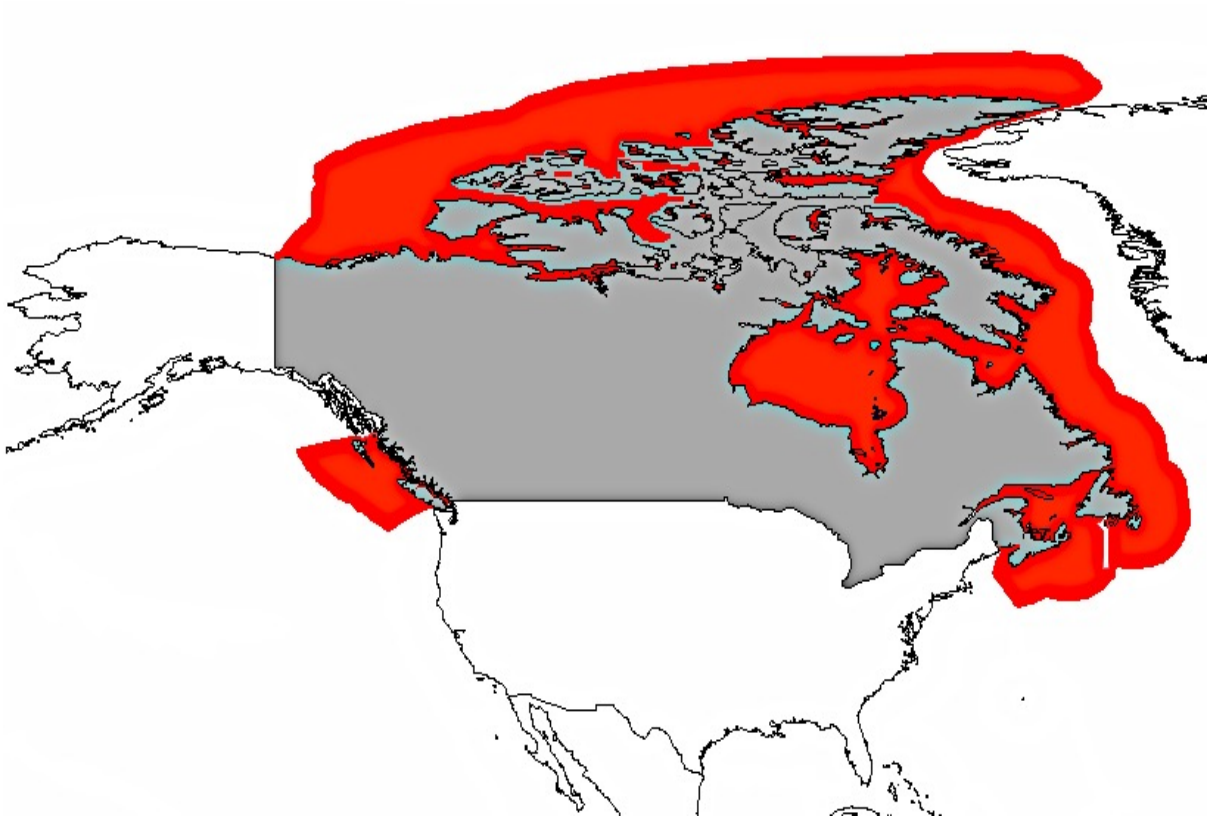
CANADA – COUNTRY REPORT



FAO landings (2013): 814,371 tonnes
Fisheries contribution to GDP: Not Available
Law of the Sea (Ratification /accession): 7th November 2003
Coastline: 202,080 km
RFMO Membership: ICCAT, IATTC, NAFO, NPAFC, WCPFC
Patrolling agencies: Canadian Coast Guard (CCG), Fisheries and Oceans Canada (DFO)

Rank	Priority for maritime security tasks
1.	Unauthorised Vessel Traffic
2.	Narcotics & Weapons Trafficking
3.	Illegal Fishing

SECTION 1: MCS INFRASTRUCTURE

1. **Does the country have adequate surveillance infrastructure (patrol aircraft, sea based patrol vessels and coastal patrols) to effectively patrol fisheries resources within its EEZ?**

   Score: 7

   Score Range: 7-8

   Available infrastructure is adequate for monitoring some jurisdictions effectively. Royal Canadian Air Force has 3 squadrons of P-3 Orion (*CP-140 Aurora aircraft*) for maritime patrols; Canadian Coast Guard has 55 patrol boats for maritime security duties (IISS 2020). OAG-Canada (2022); Choi (2019); DFO (2011, 2014); Jane (2012); Millar (1995); CCG (2009) documents provide more information on this aspect. Under the National Aerial Surveillance Program (NASP) two Dash 8 aircraft (DeHavilland Canada) and two Beechcraft Super King Air B200 aircraft are used for civilian and fisheries patrols. Transport Canada was also reported to use Dash 7 aircraft for fisheries patrols (CBC 2013). The Royal Canadian Air Force also uses CP-140 aircraft for Operation Driftnet patrols in the North Pacific; the operation also uses Canada's Radarsat-2 satellite imaging technology to patrol the NPAFC area. In May 2019, Canadian Government announced a $15.7-billion program to induct 18 new Canadian Coast Guard ships (Globe and Mail, 2019; Canadian Govt, 2019).

   Canadian Coast Guard has 20 Patrol vessels for fisheries enforcement duties in the Pacific, Atlantic and Arctic coasts; In the **Atlantic region,** Canadian Coast Guard has four offshore patrol vessels (CCGS *Cape Roger*, CCGS *Cygnus*, CCGS *Leonard J. Cowley*, CCGS *Sir Wilfred Grenfell*), one mid-shore patrol vessel (CCGS *A. LeBlanc*) and three inshore patrol vessels (CCGS *Geliget*, CCGS *Pointe Caveau*, CCGS *Cape Light*). In the **Central and Arctic region,** the Canadian Coast Guard has 4 Mid-shore patrol vessels for maritime security and fisheries enforcement duties (CCGS *Caporal Kaeble V.C.*, CCGS *Constable Carrière*, CCGS *Louis M. Lauzier*, CCGS *Corporal Teather C.V.*) 2 small mid-shore patrol vessels (CCGS *Cape Hurd*, CCGS *Caribou Isle*). In the **Western Region,** Coast Guard has six Mid-shore patrol vessels (CCGS *Tanu*, CCGS *Gordon Reid*, CCGS *Kitimat II*, CCGS *Atlin Post*, CCGS *Sooke Post*, CCGS *Arrow Post*) (DFO 2013b,c.d). DFO plans to induct three new rigid-hull inflated surveillance vessels and four jet-patrol surveillance vessels by late 2016 for coastal patrols (Gunn 2015).

   Plans were in place to install High Frequency Surface Wave Radar (HFSWR) system, which can monitor vessels up to 320 km from the coastline (Anon 2012). However, the High Freq Radar has no real practical application on east coast for federal fisheries enforcement – Radarsat will likely be a better tool (esp. when 3 new satellites are launched) (Jenkins, *pers. comm.*, 2013).

"…the Government of Canada has approved significant investments to support recapitalization of the CCG fleet through the National Shipbuilding Strategy (NSS). In addition to the five large vessels and various small vessels previously approved, new funding has been secured for the procurement of up to 26 new large ships, small vessels, as well as extensive interim measures to keep the existing fleet operational until the replacement vessels can be delivered" (DFO 2021).

2. **Does the country have adequate trained officers to conduct MCS operations?**
Score: 7
Score Range: 5-7

Adequate for oversight of industrial fisheries, but shortage of officers is reported for monitoring some coastal fisheries. There are ~660 fishery officers to monitor 70 major Canadian fisheries in six regions (MacLean 2008). See Ainsworth and Pitcher (2005); Anon (2015); Baum and Fuller (2016); De Lisle and Iris (2016); O'Neil (2017) documents for more information.

National Fisheries Intelligence Service (NFIS) faces many challenges, as there are huge gaps between the current capacity and demands for enforcement through the program. There are 160 Conservation & Protection (C&P) fishery officers from DFO stationed in the Pacific coast (British Columbia and Yukon Territory). In many coastal fisheries, Aboriginal Fishery Guardians (AFG) employed through respective First Nation/Aboriginal organization are involved in catch monitoring and reporting, which leads to systemic gaps in the compliance picture. DFO is increasingly relying on Electronic Monitoring (EM) and dockside monitoring program (DMP) to achieve compliance in commercial fisheries.

3. **Does the country have adequate management plans to monitor their fishing vessels on the high seas?**
Score: 8
Score Range: 7-8

Canada is a signatory to the FAO Compliance Agreement. All Canadian pelagic longliners greater than 24m in length fishing in Atlantic Ocean need to be equipped with VMS transponders and report catches for each trip. Tuna vessels operating in the Pacific Region targeting albacore tuna are licensed to operate in Canadian EEZ and the high seas. Canadian albacore tuna vessels operating in the Pacific are also allowed to transship catches to carrier vessels at sea. Vessels targeting tuna on the high seas can operate under licensing conditions authorized under Schedule II privileges. No violations are reported for Canadian flagged fishing vessels operating on the high seas hence a good score is given here. See Trépanier (2015); Gilmore (2015); DFO (2005) reports for more information on Canadian fisheries surveillance capabilities on the high seas.

4. **What proportion of fishing vessels is equipped with vessel monitoring system (VMS) to monitor their movements on a continuous basis?**
Score: 5
Score Range: 3-5

There is limited VMS coverage for commercial fishing vessels operating along Canada's Pacific coast (Sporer 2007). According to DFO (2006) VMS has been implemented for over 2000 fishing vessels operating in Newfoundland and Labrador, Maritimes, Gulf and Quebec Regions. Some of the fisheries which have 100% VMS Coverage include Mackerel - Purse seine / Midwater Trawl fishery in Maritimes region, Mackerel – Purse seine fishery in Newfoundland, Herring & Mackerel – Purse Seine fleets in the Gulf Region (DFO 2008b). Vessels fishing for Northern Shrimp in the Shrimp Fishing Areas (SFAs) 0-7 and the Flemish Cap are also required to have VMS on-board during fishing trips (12-13 factory freezer trawlers – offshore) (DFO 2010a). VMS is also compulsory for scallop draggers operating in sub-area 16E, 16F and 18A (DFO 2010b); Sea Urchin - Fishing Areas 9, 10 and 11 (DFO 2010c).

AIS – largely applies to commercial vessels not fishing vessels (in Canada) – VMS applies to some fishing fleets/vessels, mostly east coast at this time for "active" VMS (some "passive" VMS in Pacific) – Generally in Atlantic Canada VMS largely on vessels greater than 35 feet in length – ideally all vessels over 35 feet will carry VMS over time (Jenkins, *pers. comm*., 2013).

5. **What percentage of fishing vessels (>20 m OAL) is monitored through onboard observers at sea (for major commercial fish stocks)?**
Score: 6
Score Range: 5-7

A recent federal audit has reported that observer program is failing to achieve its desired objectives "*In several regions, departmental officials did not have timely access to third-party data on bycatch and discarded fish. This meant the Department did not have a complete record of total catch for the year, which compromised its ability to make timely fisheries management decisions*" (OAG 2016). The at-sea observer program covers up to 7000 fishing trips every year (MacLean 2008). See Beauchamp *et al*., (2019); Baum and Fuller (2016); DFO (2013); Millar (1995); Anon (2000); Sporer (2007); Gislason (2007); Grinnell and Cox (2007) for more information on Canadian observer coverage. Seven at-sea observers have been recently implicated for misreporting of fishing vessels positions to DFO in snow crab and shrimp fisheries (Whiffen 2014). See Pynn (2013a,b) reports for more information. In Atlantic Canada, observers are frequently required to report discards of only commercial species while non-commercial discards are overlooked (Garvais *et al*., 2010).

Extrapolation of by-catch from observer program is difficult as the coverage varies seasonally and geographically and does not match the spatial distribution of fish stocks. There is very low observer coverage in salmon and

crab fisheries especially off Northern British Columbia, where unreported subsistence catches and discards go unnoticed (salmon, herring and rockfish fisheries) due to low observer coverage and noticeable absence of DFO enforcement. A few years ago, Watershed Watch Society posted a video where illegal discard practices in the salmon seine fishery are shown; where DFO hires charter patrolman with no enforcement powers to monitor the salmon seine fishery. Similarly, there are other fisheries off northern BC and Atlantic coast where fishermen report that they never see DFO officers even during peak fishing seasons. Clearly, there are very few boots on the ground, which embolden fishermen to break regulations with ease (Anon, *pers. comm*., 2015).

SECTION 2: INSPECTIONS

6. **How often fishing vessels are inspected at sea (Identification by sight and boarding for inspections)?**
Score: 5.5
Score Range: 5-7

Such data is not available for all the fisheries in assessment; exact number of annual inspections at sea for monitoring commercial and inshore fisheries is not available for assessment from Dept. of Fisheries and Oceans, Canada (See DFO 2022 report). Antle (2016) suggests that an internal DFO report obtained by CBS news showed that sea-based patrols and inspections of foreign fishing vessels have dropped significantly in the last decade. Canadian officials conducted 241 at-sea inspections in 2005 compared to 158 in 2003 (Anon 2005). Since nineties, the Department of Fisheries and Oceans has further optimized patrolling efficiency at sea through boarding's by Fisheries Officers aboard Canadian Naval ships operating in Atlantic Canada (Hickey 2006).

Canada conducts at least 165 inspections at sea every year. See CBC (2019); OAG (2016); Q.5; Gilmore (2015); DFO (2022); DFO (2016); DFO (2013a); DFO (2011); Millar (1995); Sporer (2007); OECD (2012) documents for more information.

Table 1 : ***Integrated Fisheries Management Plans (IFMP) for key commercial species along Canada's coasts*** *(Source: DFO (2013a)*

Name of the fishery	Observer scheme	Vessel monitoring system (VMS)	Other Notes
Central and Arctic Region			
Northern Shrimp – Newfoundland, Labrador, Davis Strait (IFMP effective since 2003)	100% observer coverage for offshore fleet; 10% coverage for inshore fleet	Vessels fishing outside Canadian waters must be equipped with VMS devices for vessels >30.48 m	TAC in place; all offshore vessels must report their position and catch daily; Vessels should submit logbooks and purchase slips to DFO. *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Northern Shrimp – Shrimp Fishing Areas (SFAs) 0-7 and the Flemish Cap (IFMP effective since 2007)	100% observer coverage for offshore fleet (Approx. 2000 observer days annually); 10% coverage for inshore fleet (Approx. 600 days annually)	All vessels must be equipped with DFO approved VMS devices.	TAC in place; Enterprise Allocation (EA) Program for the offshore fleet; Offshore vessels must report their position and catch daily. *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Gulf Region			
Atlantic Mackerel (IFMP effective since 2007)	Purse seine fishery has observer coverage	None reported	Atlantic-wide TAC in place; dockside monitoring, at-sea observers, hails of departures and arrivals, buyer hails and purchase slips, and submission of logbooks (Vessels >35' in length must complete and submit a fishing log). *Aerial surveillance – Yes* *Sea based patrols – Yes (Small vessel patrols and landing checks)* *Dockside monitoring – Yes*
Atlantic Bluefin Tuna (IFMP effective since 2008)	Observer coverage – Yes (Minimum 5% coverage)	None reported	TAC in place; 100% Logbook coverage required as condition of the license; Transshipments at-sea monitored through Over-flights, at-sea surveillance and boarding's, covert operations *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Atlantic Swordfish and other tunas (IFMP 2004-2006)	100% observer coverage for longline fleet	None reported	100% industry-funded dockside monitoring of all landings. Logbooks required for all fishing vessels *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Newfoundland and Labrador Region			
Northern Shrimp - Shrimp Fishing Areas	Offshore fleet has 100% observer	All fishing vessels equipped with VMS	TAC in place; Dockside Monitoring Program (DMP) is required for all landings from

(SFAs) 0-7 and the Flemish Cap (IFMP effective since 2007)	coverage; Inshore fleet has 10% observer coverage.	devices and send catch and position reports daily.	<100ft fishing vessels, but not required on shrimp landed from >100ft vessels; Logbooks required for all fishers.
Snow Crabs (IFMP in place since 2009-2011)	Yes – at-sea observer coverage.	VMS is mandatory for fishing vessels 40′ and greater targeting snow crabs.	Fishery managed as an individual quota (IQ) of fishery; trip and weekly limits in place; 100% dockside monitoring; Transshipments from fishing vessels is not permitted; All vessels must complete and submit logbooks to DFO. *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Atlantic Cod (*Gadus morhua*) (IFMP effective since 2009) 3Ps Cod fishery	Yes – at-sea observer coverage in place. Targets of 5% observer coverage.	VMS in place.	TAC in place; logbooks (<35' Gillnetters and other fishing vessels sector; log books for (trawlers <35' sector); 100% dockside monitoring; Hail-in Hail-out requirements *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Pacific Region			
Salmon – North Coast and South Coast of British Columbia (IFMP 2013-2016)	Observer coverage for some salmon species.	None reported	Commercial Harvest Logs and Electronic Logbooks (E-Logs); 100% dockside validation of the catch at designated off-loading locations; Over flights and charter patrols in inshore waters.
Crabs by Trap (IFMP 2013-2014)	None reported	None reported	Daily fishing time restrictions and weekly haul limits; dockside monitoring for enforcement of size limits, soft-shell crab, female crab, and prompt completion of harvest logs as per the Conditions of License; Checks of transportation vehicles on route from off-loading sites to processors; Random checks at processing facilities. *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Shrimp trawl fishery (IFMP 2013-2014)	Yes – at-sea observer coverage is reported.	None reported	TAC in place; Notification and reporting measures (hails when fishing, hails of catch, logbooks, electronic data reporting). *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Groundfish fishery (IFMP effective Feb 21, 2013) include Groundfish trawl, Halibut, Sablefish, Inside Rockfish, Outside Rockfish, Lingcod, and Dogfish fisheries	Yes – observer coverage is reported.	None reported	TAC in place; Fishing log must be updated prior to landing or sale of groundfish for each fishing trip; Hail-out and Hail-in reports; Hook and line and trap groundfish species must be landed only at designated landing ports. *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Offshore Pacific Hake fishery (2011-2013 IFMP	Yes – at-sea observer coverage is reported.	None reported	TAC in place; Fleet subjected to 100% at-sea monitoring either through at-sea observer or

for Groundfish)			electronic monitoring; Shore side hake deliveries subject to 100% coverage through Dockside Monitoring Program (DMP); Hail-outs required at least 8 hours prior to undertaking any fishing trip.
Pacific Herring (IFMP 2012-2013)	Yes – at-sea and dockside observer coverage are reported.	None reported	Commercial fishers operate under a TAC; Fisher Identification Numbers (FIN) assigned to all commercial fishers; Harvest log must be kept onboard each licensed fishing vessels and catch information should be recorded by midnight each day; Hail-in and Hail-out requirements; All herring shall be delivered to a British Columbia port and must be offloaded within 18 hours of capture. A certified observer must validate the weight of all herring offloaded at designated ports. *Aerial surveillance – Yes* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Pacific Sardine (IFMP 2012-2013)	Yes – at-sea and dockside observer coverage are reported.	None reported	Recreational fishers can harvest sardine with a BC Tidal Waters Sport Fishing license; TAC in place for commercial fishing vessels; logbooks, third party at-sea observer coverage and a 100% dockside validation program. *Aerial Surveillance – Yes (local air charters contracted on an as-needed basis)* *Sea based patrols – Yes* *Dockside monitoring – Yes*
Albacore tuna (IFMP 2013-2014)	None reported	Yes – VMS is required as per tuna RFMO regulations	Around 150 troll vessels fish in Canadian EEZ and 30 vessels operate on the high seas; Under the Canada/USA Pacific Albacore Tuna Treaty Canadian vessels are also allowed to fish in U.S. EEZ; Catches are monitored through logbooks and fish slips *At-sea monitoring – No* *Dockside monitoring – No* *Aerial Surveillance – Yes in co-operation with US Coast Guard for vessels operating in U.S. EEZ and high seas waters.*
Halibut fishery	Fisheries observers attend 100% of all landings and weigh-out inspections at landing locations.	None reported	Commercial vessels operate under a transferable Individual Vessel Quotas (IVQ); Commercial fishing vessels in the halibut fishery have an option to carry either a certified and designated on-board fishery Observer or an Electronic Monitoring (EM) system; In 2012, all 155 vessels made trips with the EM system; Hail-in and hail-out requirements; Recreational vessels have bag and size limits *At-sea monitoring – Yes* *Dockside monitoring – Yes*

7. How often fishing vessels are scrutinized through aerial patrols?

Score: 7

Score Range: 5-7

Under the Fisheries Aerial Surveillance and Enforcement (FASE) program several fixed-wing aircraft are deployed for fisheries conservation and enforcement duties from coast to coast. Aerial surveillance data collected through maritime patrols is shared at the Marine Security Operations Centres (MSOCs) for identification of potential threats and interception of the same through sea-based patrol assets (PWGSC 2018). All FASE operations are based out of three bases (CFB Comox, BC; Halifax, Nova Scotia; and St. John's, Newfoundland and Labrador). See Table 2. Below for details of operational statistics for the 2016-2017 FY. *Adjustment in score range for this indicator* - Delays in procuring offshore patrol vessels, low arctic surveillance, and aging CCG ships (See OAG-Canada 2022 report for more information).

On 4 March 2019, the Government of Canada awarded five-year aerial surveillance contract to PAL Aerospace defence company based in Newfoundland. As part of the contract, PAL would use two King Air 200 and two Dash-8-100 maritime patrol aircraft (DFO 2019).

	Monthly Average	Annual Flying Hours		
C&P Region	Patrol Hours	Patrol Hours	Number of Patrols	Average flight Hours
Pacific	85.5	1,026.3	178.0	5.8
Central & Arctic	0.0	58.3	7.0	8.3
Quebec	37.0	115.4	51.0	8.7
Gulf	32.5	390.4	67.0	5.8
Maritimes	88.8	1,066.1	220.0	4.8
NL	155.4	1,864.8	439.0	4.2
Total	399.2	4,521.3	962.0	6.27

Table 2. Fixed-wing patrol statistics. Source: PWGSC (2018)

Surveillance aircraft are used for monitoring marine pollution, search and rescue, merchant traffic and fisheries patrols. If aerial reconnaissance data is filtered by various maritime security tasks, allocation to fisheries surveillance is hardly enough on both Pacific and Atlantic coasts. Although, there is more emphasis on use of aerial surveillance for high seas patrols in NPAFC and NATO waters domestic fisheries patrols are rather subdued (Anon, *pers. comm.*, 2016).

Although more recent data is not publicly available, data from 2009-2010 suggests Pacific Region received 1188 hours of aerial surveillance while the suggested minimum was around 1400-1500 hours, while in the 2007-2008 time period Maritimes Region (Atlantic Ocean) received 1300 hours, New Foundland/Labrador received 2426 hours of aerial surveillance (DFO 2011). Off the west coast, 160 missions lasting 973 hours were undertaken under the C&P Aerial Surveillance Patrols from 1 Jan – 15 December 2015 (IPHC 2016).

Monitoring of fishing vessels by air is undertaken on a regular basis, with aerial Surveillance of 5500 hours/year (MacLean 2008). See OAG-Canada (2022); DFO (2009b), (2011) and Peterson *et al.*, (2005) documents for information on Canadian enforcement vessels and aerial surveillance program. During 2007-08, a total of 5126 hours of fixed wing flying hours was recorded for aerial surveillance of the Canadian EEZ (DFO 2011). See DFO (2009c) for more information.

8. **How often are fishing vessels inspected at landing centers and docks for foreign and domestic vessels (Dockside monitoring)?**
Score: 7.5
Score Range: 7-8

Dockside Monitoring Program (DMP) exists for commercial fishing vessels using its domestic ports and for foreign vessels calling at designated major ports (MacLean 2008; OECD 2012; Beauchamp *et al.*, 2019). Hail-in and hail-out requirements further strengthen reporting requirements for the domestic fishing fleet to monitor quota compliance and accurately quantify catch reporting. The country is reported to undertake regular inspections of domestic and foreign fishing vessels calling at its ports. "*Percentage of inspection activities that have resulted in compliance actions*" is not available from DFO for detailed assessment of this indicator (See DFO 2022 report). See OAG (2016) report on conflict of interest for companies engaged in dockside monitoring.

PSMA Status: FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (Signed on November 19, 2010; Ratified on 20 June 2019).

On the Pacific coast, 100% of landings in the Hake trawl and Groundfish trawl fisheries are reportedly covered through random dockside inspections; regular dockside monitoring also exists for some aboriginal and recreational fisheries (Sporer 2007). See Stanley *et al.*, (2014); DFO (2013a); DFO (2008b); DFO (2005) and DFO website for more information.

9. **Are there adequate plans to monitor catches in coastal areas through coastal patrols (beach patrols, small-scale fishing gear and catch inspections) on a regular basis?**
Score: 7
Score Range: 5-7

Few incidents of under-reporting and illegal lobster fishing (Atlantic coast) are reported each year; Poaching has posed a persistent problem in salmon, abalone, rockfish and crab fisheries along the Pacific coast. It is important to note that DFO does not have a complete disclosure with respect to catches (See Ecotrust Canada 2008; DFO 2022 reports) as well as enforcement data for small-scale, commercial, or recreational sectors. See Q.5; Beauchamp *et al.*,

(2019); O'Neil (2017); Lancaster *et al*., (2015); DFO (2013a); Millar (1995); Sporer (2007); Stevens *et al*., (2008); Condie *et al*., (2014); MSC (2012) and DFO (2011); Robb *et al*., (2011); Parsons (2010) documents for more information on extent of violations in coastal fisheries.

Reliance on DFO citations and violations data to understand compliance picture is bound to pose difficulties, as a range of fishing crimes identified by DFO officers is neither captured or published as far as detection of illegal fishing and under-reporting are concerned. Salmon, herring, crab and rockfish charter/sport fishing boats are rarely inspected along the Pacific coast. DFO inspections are rare along British Columbia, Northwest Territories and Nunavut provinces. Only a few commercial fisheries receive inspections on the dockside; rest of the migratory stocks like salmon, herring, and crab fisheries in coastal bays receive very little enforcement. Inspections at sea are erratic even during peak fishing seasons off Labrador and Hudson Bay (Atlantic coast), Northern and central British Columbia, Haida Gwaii and Vancouver Island. The vast network of rivers, bays, inlets and estuarine habitats along Canada's extensive coastline make it difficult for proper scrutiny of landed catches. It is a common knowledge that under-reporting, unauthorized sale and bartering of salmon and other seafood is prevalent in many sport charter, subsistence & food fisheries, and often such catches are not reported to the Federal Government. Under-reporting in subsistence and coastal fisheries can reach as high as 25-40% in some coastal communities off western Canada. In many provinces, catch collection and decision-making processes are under the control of communities (First Nations) rather than DFO. The persistent culture of neglect and mistrust between these communities and DFO officers has meant that very little of the actual catches are reported. Further, because even catch quantification relies on reporting by First Nations, the Aboriginal food, social, and ceremonial (FSC) fisheries system has been subjected to rampant abuse. Putting the First Nations in-charge of monitoring their fishery equates to conflict of interest as they can exploit the reporting situation to their own advantage. Although, several First Nation bands legitimately use the FSC fishery, it is a common knowledge in several coastal communities that fish caught under Food fishery is openly sold or bartered with individuals from B.C. Licensed recreational salmon, Rockfish and crab fishers also do not comply with their daily trip limits leading to under-reporting of catches in coastal bays (Anon., *pers. comm*., 2016).

10. Are all the catches that are caught in this jurisdiction at sea accounted for (i.e., unreported Trans-shipments at sea)?
Score: 7.5
Score Range: 7-8

Canada is signatory to the UN Fish Stocks Agreement (Ratified on August 3, 1999). DFO and Canadian Coast Guard do not share data on exact number of

transshipments monitored each year. No violations are reported for Canadian flagged fishing vessels for this aspect hence a good score is given here. See DFO (2005); DFO (2013a); Homes (2014) reports for national measures implemented in this direction.

Transshipments at sea are relatively well patrolled in NAFO and NPAFC waters but the same cannot be said for Pacific coast and northern sections of the Canadian EEZ. Transshipments are rarely reported and under Canadian laws at-sea transshipments are illegal within the EEZ. Canadian Coast Guard allocates substantial aerial and maritime patrol time to prevent illegal transshipments in offshore waters; Maritimes Region (Atlantic provinces) receives substantial patrolling effort but except for halibut fisheries other fish stocks off British Columbia (salmon, herring, rockfish, etc.) do not receive adequate enforcement (Anon, *pers.comm.*, 2016).

11. **Are vessels required to undergo inspection of equipment and fishing gear for every fishing trip?**
Score: 7
Score Range: 5-7

Scale of illegal gear usage is harder to gauge. Currently, there is no detailed annual gear seizures report from DFO with information on number of illegal gears seized versus number of licensed fishing gears authorized by various fleet types in artisanal and industrial sectors. See Sporer (2007); DFO (2013a); O'Neil (2017) reports for some information on this aspect.

Yes, there are routine inspections of gear and equipment on a regular basis in major commercial fisheries both at dockside and during boarding's at sea. However, there are regular reports of illegal fishing gear seizures in several coastal and recreational fisheries that deserve more attention in future (Anon, *pers. comm.*, 2016).

12. **Has the country taken adequate measures to revise and implement national fisheries laws to curtail illegal fishing practices; and does it comply with national and international laws signed?**
Score: 7
Score Range: 7-8

Fisheries Act (R.S.C., 1985, c. F-14) is the main national legislation for fisheries management in Canadian waters. The country has adopted NPOA on IUU Fishing. Canada has also ratified the FAO Compliance Agreement on 20 May 1994, UN Fish Stocks Agreement on 3 August 1999 and UN Port State Measures Agreement on 20 June 2019. Fresh attempts to adopt a new Fisheries Act (2003-2004 and more recently in 2007-2008) to make it compatible with current best practices in fisheries management were not fruitful (FAO 2013). In June 2019, 'Fisheries Act' was amended through Bill C-

38 that stipulate rebuilding plans for depleted stocks and new decision-making strategies that are based on science.

DFO enforcement is confined to the dockside leaving it blindsided at sea. Patrolling infrastructure is old and obsolete with greater part of the Coast Guard fleet struck at docks for unplanned maintenance. Coast Guard needs new patrol ships to gain tactical advantage for inspections in offshore fisheries. The number of fisheries inspectors is also not proportional to the requirements on the ground owing to budget cuts. Transport Canada (2016) (citing DFO (2014) report) states "*the Canadian Coast Guard fleet is aging, which has implications for maintenance as well as procurement. Given that 29 percent of the large vessels are more than 35 years old and close to 60 percent of small vessels are older than the design life of 20 years, it is not surprising that the number of major systems repairs required is increasing, vessel days are decreasing, and the number of ships out of service is increasing over time. Indeed, for such a critical piece of transportation infrastructure, the Canadian Coast Guard is not receiving the political attention, or the administrative and financial resources it requires*". However, it is important to state that Canada has a good record for management of its high seas fishing fleet (Anon, *pers.comm*., 2016).

See DFO (2022); Beauchamp *et al*., (2019); O'Neil (2017); OAG (2016); Antle (2016); Baum and Fuller (2016); Brewster (2016); Gilmore (2015); Ainsworth and Pitcher (2005); Metuzals *et al*., (2008); Parsons (2010); Ecojustice (2011); VanderZwaag *et al*., (2012); Withers (2016); Brooks (2014); Pinkerton *et al*., (2014); Mageau *et al*., (2015); Lancaster *et al*., (2015); McDevitt-Irwin *et al*., (2015) documents for more information.

Flag of Convenience	No
Vessels on the RFMO – IUU vessel list	No

RFMO	Year of the assessment	Compliant	Partially Compliant	Not Compliant	Source
ICCAT	2013	Yes			ICCAT (2014a) ICCAT (2014b)
IATTC	2013	Yes			IATTC (2014)
NAFO	2013	Yes			NAFO (2014)
NPAFC[1]	2013	N/A	N/A	N/A	Not Available
WCPFC	2013	Yes			WCPFC (2015)

RFMO Compliance table: Peer Reviewer comment - updates pending?

Last update: 27 November 2022

[1] *NPAFC Committee on Enforcement (ENFO) meeting proceedings is shared with contracting parties and members only. MCS data from annual Enforcement Evaluation and Coordination Meeting (EECM) is also not available for scrutiny to evaluate compliance of member countries fishing vessels.*

Note:

Bibliography and other notes relevant to this country report including methods, results and discussion for the global evaluation of 84 countries would be released shortly through IUU Risk Intelligence website (https://iuuriskintelligence.com/). (The author can be contacted at prammod.raju@gmail.com to provide any feedback).

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