



BY CATCH MANAGEMENT





BY CATCH IN NORWAY. HOW IT WORKS?



Discard ban in Norway :

- All catches that are dead or dying → viable fish can be released back to the sea.(except snow crabs)
- List of species under the landing obligation.
- By catch system to allocate quotas to cover expected unavoidable by-catches in non-direct fisheries.
- Real time closures of fishing areas (RTCs)
- Selectivity measures



By-catch system

- Specific **permissible by-catch** levels calculated for each fishery.
- Depending on : fishing area, gear, target species and season , could vary from 10% some months and 25% in other months.
- Example:
 - when fishing for cod, total by-catches of saithe, haddock and whiting may not exceed 20% of total catch weight;
 - when fishing for sandeels using a trawl of mesh size less than 16 mm, by-catches of other species may not exceed 10% of total catch weight.
- Quantities required to allow for by-catches are set aside before determining the quantities for direct fisheries. Calculated annually before the fishery is opened.
- Bycatch allocations examples: NorthSea cod to cover unavoidable bycatches in saithe and in Northern shrimp fisheries, saithe in Norway pout(*Trisopterus markii*) trawling, and bluewhiting (*Micromesistius poutassou*) in herring(*Clupea harengus*) fisheries.



Destination of the excess of by catch and movement rules

- According to Norwegian regulations it is prohibited to catch 'illegal' fish.
- **If the proportion of illegal fish in a haul exceeds a certain specified level** (depending on fishing area and fishing gear), the vessel is obliged to move to a different fishing ground at least 5 miles. If it happens again in the new location, the vessel has to move for at least 5 miles (from both areas).
- The illegal by-catch and juveniles:
 - have to be landed and deducted from the TAC of the given species,
 - Are sold through the sales organizations, just like the rest of the catch, but revenues are confiscated. These incomes are used to benefit either the organizations or the Scientist Institute.





BY CATCH IN NAFO HOW IT WORKS?

- Most commercial species are regulated. Quota of regulated stocks is allocated by contracting parties.
- In some cases there is “ Others “ quota allocated for some stocks. This quota can be used by all contracting parties without quota of this stock allocated. The use of this Others quota is ruled.
- When “Others” quota is finished none directed fishery can be made and a by-catch limit is established for these stocks. This by-catch is also applicable to the contracting parties when their quotas allocated are exhausted.
- No landing obligation is in force in NAFO area





Annex I

(2016)

Annex LA

ANNEX I – FISHERIES MANAGEMENT

Annex LA – Annual Quota Table

CATCH LIMITATIONS – Article 5. Total allowable catches (TACs) and quotas (metric tons in live weight) for 2016 of particular stocks in Subareas 1–4 of the NAFO Convention Area.

Species	Cod				Redfish				American plaice		Yellowtail	
	COD 3L	COD 3M		COD 3NO	RED 3LN		RED 3M	RED 3O	RED 1F_2_3K (i.e. Sub-Area 2 and Divs. 1F+3K)	PLA 3LNO	PLA 3M	YEL 3LNO
Stock Specification			% of 3M Cod TAC			% of 3UN Redfish TAC						
Contracting Party												
Canada		111	0.80	0	4 430	42.60	500	6 000	0 ¹	0	0	16 575
Cuba		515	3.70	-	1 019	9.80	1 750		0 ¹	-	-	-
Denmark (Faroe Islands and Greenland)		3 114	22.35	-	-		69 ¹²		0	-	-	-
European Union		7 945 ¹³	57.03	0 ¹	1 896 ¹⁴	18.23	7 813 ¹⁵	7 000	0 0 ¹	0	0 ¹	-
France (St. Pierre et Miquelon)		-		-	-		69 ¹²		0 ¹	-	-	340
Iceland		-		-	-		-		0	-	-	-
Japan		-		-	-		400	150	0 ¹	-	-	-
Korea		-		-	-		69 ¹²	100	0 ¹	-	-	-
Norway		1 289	9.25	-	-		-		0	-	-	-
Russian Federation		901	6.47	0	2 992	28.77	9 137	6 500	0	-	0	-
Ukraine								150	0 ¹			
United States of America		-		-	-		69 ¹²		0 ¹	-	-	-
Others		56	0.40	0	63	0.60	124	100	-	0	0	85
TOTAL ALLOWABLE CATCH	*	13 931 ^{13/14}	100.0	**	10 400 ¹⁴	100.0	7 000 ¹⁵	20 000	0 ^{1/16}	*	**	17 000 ¹⁴



NAFO

Northwest Atlantic Fisheries Organization

Annex I.A

(2016)

Species	Witch			White hake	Capelin	Skates	Greenland halibut	Squid (Illex)	Shrimp	
	WIT 3L	WIT 3NO	% of 3NO Witch TAC	HKW 3NO	CAP 3NO	SKA 3LNO	GHL 3LMNO	SQI 3_4 (Le. Sub-areas 3+4)	PRA 3L	PRA 3NO
Contracting Party										
Canada		1 303	60.00	294	0	1 167	1 644	N.S. ²	0	
Cuba		-			0		-	510	0	
Denmark (Faroe Islands and Greenland)		-			-		189	-	0	
European Union		288 ⁴	13.27	588	0 ⁶	4 408	6 430 ¹¹	N.S. ⁴ 611 ⁶	0 ⁷	
France (St. Pierre et Miquelon)		-			-		180	453	0	
Iceland		-			-		-	-	0	
Japan		-			0		1 124	510	0	
Korea		-			-		-	453	0	
Norway		-			0		-	-	0	
Russian Federation		559	25.73	59	0	1 167	1 399	749	0	
Ukraine							-		0	
United States of America		-			-		-	453	0	
Others		22	1.00	59	-	258	0	794	0	
TOTAL ALLOWABLE CATCH	*	2 172²⁰	100.00	1 000⁹	*13	7 000¹⁷	10 966	34 000	0	*

By-catch system

- Bycatch retention on board when no directed fishery is permitted in NAFO.
- Each Contracting Party shall ensure that its vessels, minimize by-catch of species from stocks identified in *Annex I. A*, while operating in the Regulatory Area.
- A species listed in *Annex I.A* shall be classified as by-catch when it is taken in a Division where any of the following situations exist:
 - (a) no quota allocated to that Contracting Party for that stock in that Division, in accordance with *Annex I.A*;
 - (b) a ban on fishing for a particular stock is in force (moratoria); or
 - (c) the “Others” quota for a particular stock has been fully utilized.

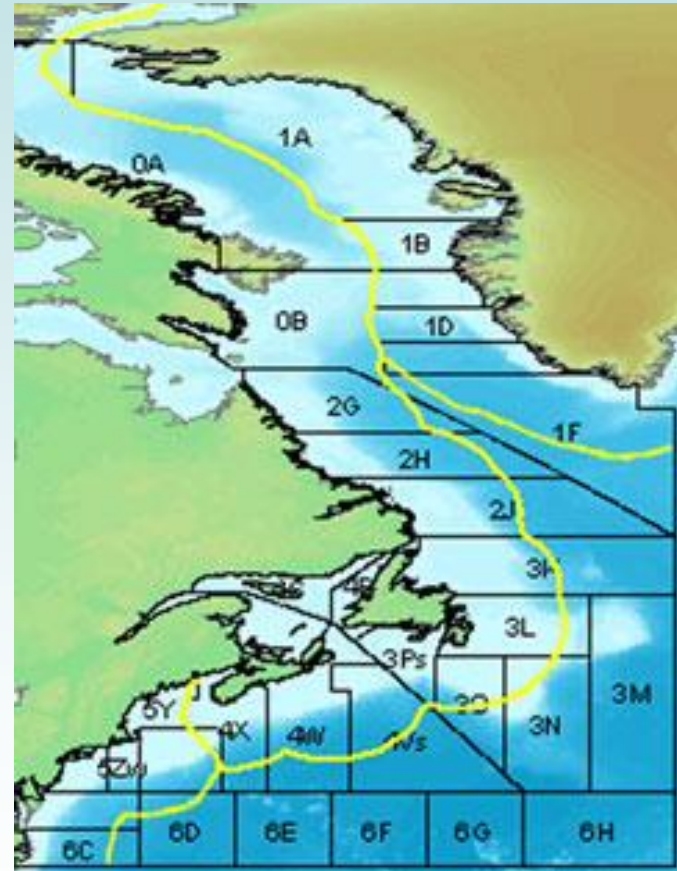
By-catch system II

Each Contracting Party shall limit the retention of on board species classified as bycatch to the maxima specified below:

- (a) for **cod in Division 3M, redfish in 3LN and witch flounder in 3NO**: 1 250 kg or 5%, whichever is the greater;
- (b) for **cod in Division 3NO**: 1 000 kg or 4%, whichever is the greater;
- (c) for **all other stocks** listed in Annex I.A where no specific quota has been allocated to the flag State Contracting Party: 2 500 kg or 10%, whichever is the greater; (2016)
- (d) where a ban on fishing applies (moratoria), or when the “Others” quota opened to for that stock has been fully utilized: 1 250 kg or 5%, whichever is the greater;
- (e) once the **directed fishery for redfish in Division 3M is closed** in accordance with Article 5.5(d): 1 250 kg or 5%, whichever is the greater; and
- (f) while conducting a directed fishery for **yellowtail in Divisions 3LNO**: 15 % of American plaice; with some exceptions.

Movement rules

- According to NAFO regulation, **if by-catch limits in a haul exceeds a certain specified level** (depending on the stock), the vessel is obliged to comply with a movement rule.
- If it happens in more hauls The distance between the fishing grounds should be at least 10 nautical miles, has to leave the division for 60 hours and make trial tows.
- All this has to be documented and registered in the logbook.





BY CATCH IN ICELAND. HOW IT WORKS?

- Vessels with ITQ system are not allowed to discards.
- Vessels are obliged to have catch quota for their catches in all species, which are subject to the ITQ system.
- There is no by-catch rule and vessels are not allowed to commence a fishing trip unless they have sufficient catch quota for their probable catches.
- Other management measures: mesh size regulation to improve selectivity, sorting grids, closed areas, spatial closures to protect spawning biomass etc.



By-catch system

Flexibility options:

- Undersized fish is only partially deducted from catch quotas.
- Damaged fish is not deducted from quota.
- Species conversion converted by “cod-equivalent kilo” based on last year’s price (cap on each species and is not allowed to change into cod)
- Transfer between years 5% can be caught in excess and deducted from next year’s quota.
- 30% of each vessel unused quota can be transferred to the following fishing gear.
- Vessels can buy catch quotas for excess landings (up to three days after landing).
- Permission to land up to 5% excessive quotas. This catches have to be stored separately and can be sold on auction but just 20% of value would be given to the vessel (thereof shared of crew), and 80% of value will be put into a special research and development fund, divided into four seasons per year.





BY CATCH IN EU. HOW IT WORKS?

- In the EU there are some references in the TAC and quota regulation to by-catches and some options depending on the waters.
- “Others quotas” “OTH/*” “OT1/*” and “OT2/*” special condition quotas to cover certain by-catch species.
- these catches have to be registered under (OTH/*...) and the stock area/s.
- As an example: we have some stocks of sprat, sandeel, Norway pout or horse mackerel, able to cover by-catches of boarfish, whiting, mackerel, dab, etc.



CONCLUSIONS

- **NORWAY EXAMPLE:** Package of measures (selectivity improvements/fleet data after improvements/quota reallocation inside EU/ by-catch unavoidable resultant / Movement rules when a haul exceeds by-catch/ establishment of a percentage of by-catch levels per fleet) and in addition to that, develop a system to control the by-catches over the limit established in order to avoid encouraging this behavior. Time and funding is necessary to achieve this approach for EU fleet.
- **NAFO EXAMPLE:** “Others quota” for contracting parties without allocation of some regulated stocks. (use of this quota ruled/establishment of a by-catch limit after the exhaustion of regulated species or others quota/movement rules if this limit is exceed in each haul). In NAFO we have to take into account that landing obligation is not in force so excess of by-catch is discarded
- **ICELAND EXAMPLE:** ITQ System with quota trading and several flexibilities to cover the rest of the species in excess of the quotas allocated.
- **UE example:** special conditions to cover certain by-catch species counting against other species quotas.

- Apart from the examples showed in this presentation, there are other measures regarding by-catch management in ICCAT and other RMFOs in order to cover this unavoidable catches that could be also studied.
- Every single measure to comply with the by-catch limits or landing obligation is accompanied by a lot of other solutions regarding technical measures, flexibilities, exemptions, etc.
- Most of the examples explained have implemented as well movement rules to leave the area if by-catch is exceeded.
- These examples could be inspiring for the by catch species management, but other solutions have to be implemented for other situations like o-TACs where we could opt for example to treat this stocks equal to forbidden species.



PROPOSALS

Some examples of proposals that could be evaluated as a first approach are:

- Convert some small quotas in bigger OTH quotas of stocks from NWW covering groups of by-catch species, allocated by Member states. Example: All deep-sea species TACs one OTH quota.
- Study to eliminate total allowable catches of some stocks that are always present as by-catch in the haul for all vessels in certain areas.
- Establishing by-catch rules and limits according to available data to each métier in a regional basis with a system to evaluate these limits as selectivity measures are implemented.
- Any other suggestions?

