



Serial No. 2557
(A.a.4)

ANNUAL MEETING - JUNE 1971

CANADA - U.S. NOTES ON QUOTA ALLOCATION PROCEDURES

The Commission has been giving serious attention to possible procedures for allocating national quotas. An Amending Protocol to the ICNAF Convention that will provide the Commission authority inter alia to propose country quota management schemes, which was adopted in 1969, has already been ratified by most member governments.

In anticipation of such authority the Commission in its Standing Committee on Regulatory Measures has been carefully examining certain underlying concepts that would be associated with quota allocation proposals. Discussions in STACREM, particularly at its mid-term meetings in 1969 (1969 Meeting Proceedings No. 11, Appendix I) noted that quota allocation principles should give particular weight to historical performance, but should also take into account other factors such as catches by non-members and new entrants as well as the special needs of fleets incapable of being diverted to other fisheries, states with developing fisheries, and coastal fishermen.

The potential application of these concepts to fisheries for haddock and yellowtail flounder in Subarea 5 was briefly considered at a meeting of an ad hoc Working Group on Subarea 5 Fisheries immediately prior to the 1970 Annual Meeting (ICNAF Comm. Doc. 70/33). The members of that Working Group generally agreed that further analysis of these concepts would be extremely helpful in preparing to implement country quotas schemes.

Much study has been given to this matter in Canada and the United States since the 1970 Annual Meeting. Recent discussions indicated a close parallel in thinking on this subject; hence it was decided to make this presentation jointly.

NOTE BY EXECUTIVE SECRETARY:

This paper is the basis for discussions at meetings at the Bedford Institute on 24, 25 and 26 May 1971 of the ad hoc Working Group on Regulatory Matters (formerly ad hoc Working Group on Subarea 5 Fisheries).

Elucidation of general principles is often facilitated by specific illustrations. Thus, some examples of how certain arrangements for allocating national quotas for various stocks are shown in Tables 1-7. These examples have been selected to give a representative sampling of various circumstances involved.

The illustrations attempt only to demonstrate how that portion of quota shares dependent on historical performance could be assigned under various allocation procedures using catch data from ICNAF Statistical Bulletins. (Thus, something less than 100 percent of projected allowable catches is allocated, leaving an amount to be allocated on the basis of special factors.) The weight given in the illustrations to certain important aspects of previous performance, e.g., long-term trends, short-term trends, as well as the handling of periods of particularly intense fishing all relate to previous discussions in STACREM. For example, illustrations are given on variations of a widely discussed formula in STACREM involving: (1) allocating 80 percent of an allowable catch on the basis of historical performance and (2) giving equal weight to long-term trends (10-year average catch) and short-term trends (3-year average catch).

In each of the examples, 80 percent is allocated on the basis of catches from 1960-69. The remaining 20 percent has been left unallocated to meet special needs or to accommodate other factors. The "long term" is the most recent 10 years, ending in 1969; the "short term" is the most recent 3 years, 1967-69. The average proportion of each nation's catch relative to the total has been calculated by the mean ratio method. This procedure gives equal importance to each year in the base periods.

The tables for each illustrative stock allocation also show the results obtained:

- (1) by either eliminating or retaining years of overfishing in the calculations. (For purposes of these examples specifically, "overfishing" is defined as 200 percent of estimated maximum suitable yield.)

- (2) by weighting short-term and long-term trends either:
 - (i) equally or
 - (ii) 20 percent and 80 percent, respectively.

The tables give the percent allocated to each country, and the tons of fish this would represent if the maximum sustainable catch were allocated. The latter values are, in some cases, only a reasonable judgement. They are not to be taken as fixed. In addition to the tabulated results, a graph is presented illustrating the effect of changing the short-term and long-term weighting over the entire range.

In cases of stocks which are being regulated at less than the maximum sustainable yield in order to restore the stock, it has been discussed that special allocations may be made during the restoration period giving different weights to some or all of the factors involved. Allocation of quotas on stocks with a very low maximum sustainable yield may also be made as a special circumstance with some variance in weighting factors.

The illustrations presented are intended as examples of basic concepts discussed previously in the Commission. It is the hope of the United States and Canada that these may provide the basis for further discussion and progress within the Commission toward new regulatory procedures that will help reduce the dangers of resource depletion.

Table 1.--Illustrative quota allocation for cod in Subarea 1 with MSY assumed to be 200,000 MT with no years eliminated because of overfishing. Values in thousands of metric tons with percentage shares in ().

Country	Method			
	Short term weight (50) Long term weight (50)		Short term weight (20) Long term weight (80)	
	<u>%</u>	<u>1,000 Tons</u>	<u>%</u>	<u>1,000 Tons</u>
Denmark	(18)	36	(19)	38
France	(9)	18	(9)	18
West Germany	(25)	50	(24)	48
Iceland	(1)	1	(1)	2
Norway	(8)	16	(8)	16
Portugal	(11)	22	(12)	24
Spain	(4)	8	(3)	6
U. K.	(3)	6	(3)	6
Non-Member	(2)	4	(2)	4
To be allocated on basis of special factors	(20)	40	(20)	40
Total	(100)	201	(101)	202

1969 Catch - 205,000 MT

Note: Long term base period includes 1960-69
Short term base period includes 1967-69

Table 2.--Illustrative quota allocation for cod in area 3N, O, P, with MSY assumed to be 175,000 MT with no years eliminated because of overfishing. Values in thousands of metric tons with percentage shares in ().

Country	Method			
	Short term weight (50) Long term weight (50)		Short term weight (20) Long term weight (80)	
	<u>%</u>	<u>1,000 Tons</u>	<u>%</u>	<u>1,000 Tons</u>
Canada	(17)	30	(19)	33
France	(4)	7	(4)	7
Portugal	(4)	7	(5)	9
Spain	(34)	60	(33)	58
USSR	(20)	35	(16)	28
U. K.	(1)	2	(2)	4
To be allocated on basis of special factors	(20)	35	(20)	35
Total	(100)	176	(99)	174

1969 Catch - 174,000 MT

Note: Long term base period includes 1960-69
Short term base period includes 1967-69

Table 3.--Illustrative quota allocations for haddock in area 4W with MSY assumed to be 20,000 MT* with comparisons showing results of the eliminating or retaining of 1965 as a year of overfishing. Values in thousands of metric tons with percentage shares in ().

Method	Country			To be allocated on basis of special factors		Total		
	Canada	Spain	USSR					
	<u>%</u>	<u>1,000 Tons</u>	<u>%</u>	<u>1,000 Tons</u>	<u>%</u>	<u>1,000 Tons</u>	<u>%</u>	<u>1,000 Tons</u>
<u>All base years retained</u>								
Short term weight (50)								
Long term weight (50)	(63)	13	(10)	2	(6)	1	(20)	4
Short term weight (20)								
Long term weight (80)	(61)	12	(10)	2	(8)	2	(20)	4
<u>1965 eliminated from base period</u>								
Short term weight (50)								
Long term weight (50)	(61)	12	(9)	2	(9)	2	(20)	4
Short term weight (20)								
Long term weight (80)	(57)	11	(9)	2	(13)	3	(20)	4

1969 Catch - 9,000 MT

*1972 estimated sustainable yield = 6,000 MT

Note: Long term base period includes 1960-69
Short term base period includes 1967-69

Table 4.--Illustrative quota allocations for haddock in area 4X with MSY assumed to be 20,000 MT* with comparisons showing results of the eliminating or retaining of 1966 as a year of overfishing. Values in thousands of metric tons with percentage shares in ().

Method	Country			To be allocated on basis of special factors				Total	
	Canada	Spain	USSR	%	1,000 Tons	%	1,000 Tons	%	1,000 Tons
<u>All base years retained</u>									
Short term weight (50)									
Long term weight (50)	(64)13	(1) 1	(14) 3	(20) 4				(99) 20	
Short term weight (20)									
Long term weight (80)	(60)12	(1) 1	(18) 4	(20) 4				(99) 20	
<u>1966 eliminated from base period</u>									
Short term weight (50)	(64)13	(2) 1	(14) 3	(20) 4				(100) 20	
Long term weight (50)									
Short term weight (20)									
Long term weight (80)	(60)12	(1) 1	(18) 4	(20) 4				(99) 20	

1970 Catch - 12,000 MT

*1971 quota - 18,000 MT, 1972 estimated sustainable yield = 9,000 MT

Note: Long term base period includes 1960-69
Short term base period includes 1967-69

Table 5.--Illustrative quota allocations for haddock in Subarea 5 with MSY assumed to be 50,000 MT* with comparisons showing the results of the eliminating or retaining of 1965 and 1966 as years of overfishing. Values in thousands of metric tons with percentage shares in ().

Method	Country				To be allocated on basis of special factors	Total
	Canada	Spain	USSR	USA		
	<u>% 1,000 Tons</u>	<u>% 1,000 Tons</u>				
<u>1965 & 1966 eliminated from base period</u>						
Short term weight (50)						
Long term weight (50)	(13) 6	(3) 2	(2) 1	(61) 30	(20) 10	(99) 49
Short term weight (20)						
Long term weight (80)	(11) 6	(2) 1	(2) 1	(64) 32	(20) 10	(99) 50
<u>All base years retained</u>						
Short term weight (50)						
Long term weight (50)	(13) 6	(3) 2	(6) 3	(58) 29	(20) 10	(100) 50
Short term weight (20)						
Long term weight (80)	(11) 6	(2) 1	(8) 4	(59) 30	(20) 10	(100) 51

1970 Catch - 12,000 MT

*1971 quota - 12,000 MT

Note: Long term base period includes 1960-69
Short term base period includes 1967-69

Table 6.--Illustrative quota allocation for herring in area 4WX with MSY assumed to be 120,000 MT with no years eliminated because of overfishing. Values in thousands of metric tons with percentage shares in ().

Country	Method			
	Short term weight (50) Long term weight (50)		Short term weight (20) Long term weight (80)	
	<u>%</u>	<u>1,000 Tons</u>	<u>%</u>	<u>1,000 Tons</u>
Canada	(78)	93	(78)	94
West Germany	(1)	1	(1)	1
Poland	(1)	1	(1)	1
USSR	(2)	2	(2)	2
To be allocated on basis of special factors	(20)	24	(20)	24
Total	(100)	121	(100)	122

1969 Catch - 182,000 MT

Note: Long term base period includes 1960-69
Short term base period includes 1967-69

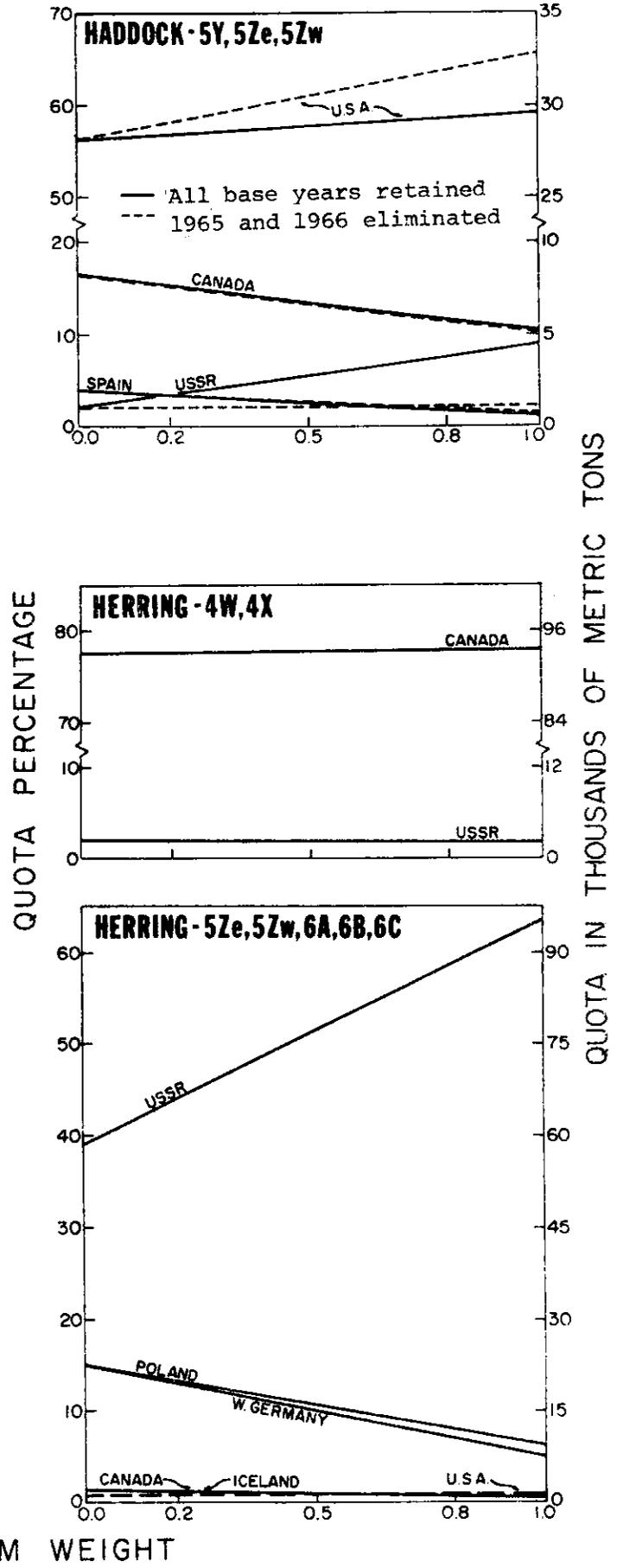
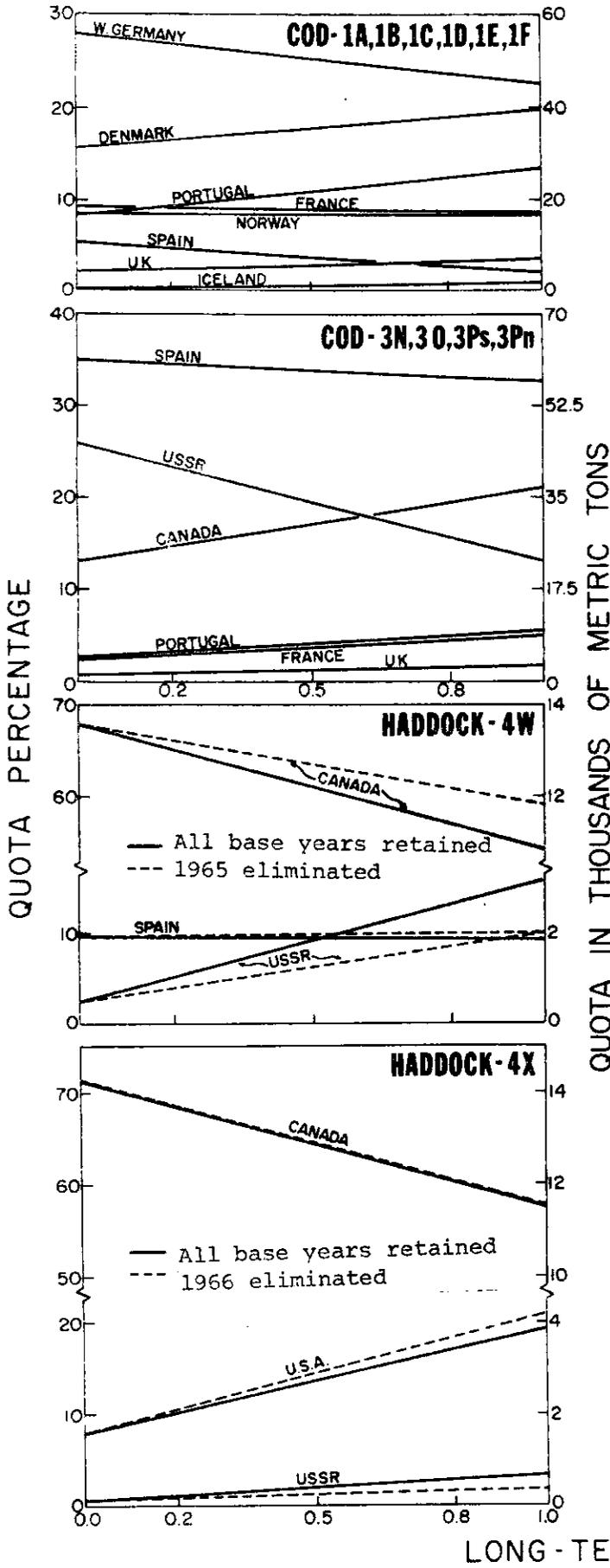
Table 7.--Illustrative quota allocation for herring in area 5Z and Statistical area 6 with MSY assumed to be 250,000 MT* with no years eliminated because of overfishing. Values in thousands of metric tons with percentage shares in ().

Country	Method			
	Short term weight (50) Long term weight (50)		Short term weight (20) Long term weight (80)	
Canada	(1)	2	(1)	2
West Germany	(10)	25	(7)	18
Iceland	(1)	2	(1)	2
Poland	(10)	25	(8)	20
USSR	(51)	128	(59)	148
USA	(1)	2	(1)	2
Non-Member	(6)	15	(4)	10
To be allocated on basis of special factors	(20)	50	(20)	50
Total	(100)	249	(101)	252

1969 Catch - 264,000 MT

*1972 estimated sustainable yield 150,000 MT

Note: Long term base period includes 1960-69
Short term base period includes 1967-69



LONG-TERM WEIGHT

INTERNATIONAL COMMISSION FOR



THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2557
(A.a.4)

ICNAF Comm.Doc. 71/18
Corrigenda

ANNUAL MEETING - JUNE 1971

Canada-United States Notes on Quota Allocation Procedures

Corrigenda

Please note corrections to Tables 3 and 4 in ICNAF Comm.Doc. 71/18:

Table 3. Under "Method" heading, "All base years retained" and "1965 eliminated from base period" should be interchanged.

Table 4. Same change as in Table 3.

Also, under "Country" heading, "Spain" should read "USSR" and "USSR" should read "USA".