NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

ORGANISATION POUR LA CONSERVATION DU SAUMON DE L'ATLANTIQUE NORD



Agenda item 4.3 For decision

Council

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Calculation of NASCO Contributions

A paper presented by Iceland

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# CNL (00) 34

### A paper presented by Iceland

## Introduction

During the last 5 years there has been a growing concern within the Icelandic government that the annual contributions to NASCO, which partly are based on nominal catches, according to Article 16 of the Convention are not being fairly shared by NASCO members. This concern is related to the fact that there has been a great incidental as well as voluntary reduction in commercial salmon catches in the member countries and a growing proportion of "catch and release" in the angling catch. At the same time there was a temporary increase in the Icelandic ranching production, which was included in the reported nominal catches from Iceland in accordance with an agreement on minimum standard for catch statistics from 1993.

In the light of this development Iceland has repeatedly since 1995 proposed that its ranching production, which has been up to 75 % of the Icelandic catch, be excluded from the calculation of contributions. The proposal, which only applied to Iceland, was exclusively handled within the FAC committee of NASCO, where it had no support from the other NASCO Delegates. A closer scrutiny of the underlying factors in the wake of a great reduction in the reported Icelandic ranching contribution in recent years has, however, revealed that other factors have been of equal or greater importance in changing the proportional share in the contributions of various countries. The most important factors are reduced commercial catches in most countries and a great increase in "catch and release". The incorporation of Sweden and Finland into the EEC is an additional contributing factor, which will not be discussed here.

At the 16<sup>th</sup> annual meeting in Westport, Iceland proposed that a change be made in the rules for calculations of contributions to NASCO. The matter was aired within the Head of Delegation meeting and it was proposed that the Secretary should prepare a paper intersessionally, which should look at the possibilities of changing the budget calculations without changing the NASCO Convention. The resulting evaluation is presented in paper CNL(00)8.

Iceland welcomes the paper by the Secretary as a significant contribution towards a just settlement of the dispute regarding payments, although it was never intended as a concrete proposal regarding a change in the calculation of payments. Iceland is, however, of the opinion, that a concrete proposal needs to be put forward, if any progress is to be made. When these proposals are on the table they can be evaluated, accepted or rejected with or without a change in the NASCO Convention.

We do not share the concern of many other NASCO Parties regarding a revision and a change in the Convention. We live in a changing world, where environmental thinking and angling practices have changed dramatically. Commercial harvest of salmon has been greatly reduced, ironically, partly as a result of NASCO's own work, partly through pressure from NGOs and also due to a phenomenal increase in the production of farmed salmon and a resulting drop in salmon prices. Freshwater problems due to acid rain and pollution as well as marine pollution from land-based sources are growing and are probably a greater threat than any remaining commercial salmon fisheries. Marine aquaculture is also known to pose a threat in some areas. This environmental development also threatens other species of freshwater and anadromous salmonids, which need to be conserved and protected.

In this context the Icelandic delegation feels that the freshwater and anadromous salmonids need to be considered in a holistic way and the mission of NASCO could be broadened to encompass those species. This issue is, however, not on the agenda at this meeting and the following paper will thus solely focus on new methods to calculate the budgetary contributions of the members to NASCO in the light of reduced commercial salmon catches and the drastic change in angling practices highlighted above. But first it is useful to highlight the proportional change in catches and contributions of the member countries of NASCO since the foundation of NASCO in 1982.

### Development in salmon catches and payments

Figures 1 and 2 show respectively the development of proportional share in reported total Atlantic salmon catches of NASCO member countries since the formation of NASCO and the resulting development in the proportional shares of each country in the NASCO budget. The underlying figures are shown in table 1. The budget contributions are in pounds Sterling and have not been adjusted for inflation as they are only used to show proportional contributions of NASCO members in any one year.

The figures show well the drastic changes that have taken place in the last two decades. It is obvious from figure 1 that the proportional share of Canada and Denmark (on behalf of Faroes and Greenland) in the salmon catches has gone down drastically while the share of Iceland and Norway has been going up. The share of other members, such as EEC and Russia, has, on the other hand, remained stable.

This development is also reflected in the proportional share of the member countries in the NASCO budget as shown in figure 2. There is a large reduction in the share of Canada and Denmark (on behalf of Faroes and Greenland), a significant reduction for the EEC and a fairly stable situation for Russia and the USA. There is , on the other hand, a substantial increase in the proportional contribution of Iceland and Norway.

It is fairly clear that commercial as well as angling catches will continue to decline. "Catch and release" of salmonids is growing in all countries and is in recent years formally excluded from the reporting to NASCO, although included by many parties in the 80s and early 90s. In the light of the current abundance of wild salmon it seems unlikely that commercial catches will grow and such a development could easily result in a public outcry from environmentalists and extreme angler groups. The observed changes are thus probably non-reversible and permanent.

In the light of the current situation Iceland believes that some changes need to be made in the calculations of contributions to NASCO either through a more liberal interpretation of Article 16 of the current Convention, probably through a protocol, or a change in the Treaty. It is contrary to environmental etiquette and related taxation code to increase the relative financial burden of NASCO members with higher catches and greater abundance of salmon at the cost of members with greater environmental problems and salmon stocks in a poor state as " the sinner should be the one that pays". It is also unfair to distribute the burden-sharing in such a way that members, which are reporting over 95 % of their true salmon catches, are as a result carrying a greater share in the NASCO budget than members with greater real catches but only reporting 40-60 % of the quantity.

These concepts are the focus of the following discussion on a revised method to calculate NASCO contributions.

### A revised system for budget calculations

Since the problem with the equity of the contributions is mostly related to the relative catches of the NASCO members, the simplest solution to the problem would be to reduce the proportion of the budget, which is linked to catches from 70 % to a lower proportion e.g. 50 %. Since such a change would probably be linked to a change in the NASCO Convention, it will not be emphasized in this paper. It should, however, clearly be considered as one of the options.

Assuming that we stick to the current budgetary provisions related to catches we feel, that the best method to adjust the current situation to the budgetary provisions in Article 16 of the NASCO Convention is to to broaden the definition of nominal catches. In this paper it is suggested that it include all man-handled salmon. To achieve this it would have to include the following categories:

- Unreported catches
- Reported marine and coastal catches
- Reported freshwater catches
- Reported "catch and release"
- Private ranching production

These categories would have to be assigned different weighted values for their use in NASCO budget calculation e.g. with respect to their threat to wild stocks, their value for angling or as spawners in a river and with regard to the precision of the statistic. A category would thus have the highest value in the budget calculations, if the risk level of the harvest method to wild stocks was high, the value of the salmon for angling and spawning was high and the precision of the reported statistic low. Conversely, a category would have the lowest value in the budget calculations, if the harvest method posed low threat to wild stocks, the value of the fish for angling and spawning was low and the precision of statistics high.

Table 2 shows the classification of the nominal catch into 5 categories, their value and risk index as well as the weighted value in the NASCO budget calculations. Also shown is the evaluation of the different categories based on their risk level to wild salmon stocks, their value for angling and spawning as well as the precision of the reported statistic.

The adoption of this or a similar plan for budget calculations would serve a twofold purpose:

- To make the payments of NASCO member countries more equitable
- To encourage NASCO members to reduce high-risk exploitation methods and increase the precision of the reported statistics, which is crucial for the management of wild salmon.

It is quite clear that the 3 factors used to evaluate the 5 categories are only examples, which seem to fit the objectives in this exercise. We could probably visualize other useful grading factors and, if the system seems to complex, the number of categories could be reduced by combining them. The main purpose of this exercise is thus to create a starting point for constructive discussion on this vital subject.

In this paper we have made no attempt to evaluate the effect of such a system on the contributions of different NASCO members. These relative proportions are not really the issue but rather the fairness of the method we use to allocate the financial burden to NASCO members.







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Budget year (BY)		Canada	Denmark	EEC	Finland	Iceland	Norway	Sweden	U.S.A.	Russia	Total
1	Catch tonnes (BY-2)	1798	939	3966		147	1345		6,4		8201,4
1084	% catch	21,9%	11,4%	48,4%	0,0%	1,8%	16,4%	0,0%	0,1%	0,0%	100,0%
1984	Budget £	21708	13934	41514		6684	17597		5339		106776
	% Budget	20,3%	13,0%	38,9%	0.0%	6,3%	16,5%	0,0%	5,0%	0.0%	100,0%
	Catch tonnes (BY-2)	1424	1050	3584	57	198	1530	25	1		7869
1085	% catch	18,1%	13,3%	45,5%	0,7%	2,5%	19,4%	0,3%	0,0%	0,0%	100,0%
1900	Budget £	18730	18781	41261	4475	5949	19796	4147	3901		117040
	% Budget	16,0%	16,0%	35,3%	3,8%	5,1%	16,9%	3,5%	3,3%	0,0%	100,0%
	Catch tonnes (8Y-2)	1112	925	2308	46	159	1623	40	2	593	6808
1092	% catch	16,3%	13,6%	33,9%	0,7%	2,3%	23,8%	0,6%	0.0%	8.7%	100,0%
1960	Budget £	35369	32863	64832	9896	11818	47534	8728	8169	4097	223306
	% Budget	15,8%	14.7%	29,0%	4,4%	5,3%	21,3%	3,9%	3,7%	1,8%	100,0%
	Catch tonnes (BY-2)	1100	1536	2951	49	198	1522	42	2		7400
1987	% catch	14,9%	20,8%	39,9%	0,7%	2,7%	20,8%	0,6%	0,0%	0,0%	100,0%
	Budget £	30317	39151	87819	9024	12043	38867	8883	8072		214178
	% Budget	14,2%	18,3%	31,7%	4,2%	5,6%	18,1%	4,1%	3,8%	0,0%	100,0%
	Catch tonnes (BY-2)	1506	1495	3573	38	330	1593	54	2	608	9199
1988	% catch	16,4%	16,3%	38,8%	0,4%	3,6%	17,3%	0,6%	0,0%	6,6%	100,0%
1900	Budget £	38391	38174	79210	S401	15167	40109	9717	8690	20657	259516
	% Budget	14,8%	14,7%	30,5%	3,6%	5,8%	15,5%	3,7%	3,3%	8,0%	100,0%
	Catch tonnes (BY-2)	1731	1476	2605	49	220	1389	47	1	559	8077
1989	% catch	21,4%	18,3%	32,3%	0,6%	2.7%	17,2%	0,5%	0,0%	8,9%	100,0%
1305	Budget £	49030	43120	59285	10049	14012	41104	10003	8937	21869	267409
	% Budget	18,3%	16,1%	25,9%	3,8%	5,2%	15,4%	3.7%	3,3%	8,2%	100,0%
	Catch tonnes (BY-2)	1280	1111	2697	34	412	1104	40	1	419	7098
1000	% catch	18,0%	15,7%	38,0%	0,5%	5,8%	15,6%	0,6%	0,0%	5,9%	100,0%
1350	Budget £	43769	39198	82101	10063	20289	39008	10225	9170	20478	274301
	% Budget	16,0%	14,3%	29,9%	3,7%	7,4%	14,2%	3,7%	3,3%	7,5%	100,0%
	Catch tonnes (BY-2)	1166	701	2311	52	275	881	29	2	359	5776
1091	% catch	20,2%	12.1%	40,0%	0,9%	4,8%	15,3%	0,5%	0,0%	6,2%	100,0%
1991	Budget £	53291	36095	95635	12095	20341	42752	11244	10245	23448	305146
	% Budget	17,5%	11,8%	31,3%	4,0%	6,7%	14,0%	3,7%	3,4%	7,7%	100,0%
	Catch tonnes (BY-2)	870	542	1438	59	420	919	33	2	316	4599
1992	% catch	18,9%	11,8%	31,3%	1,3%	9,1%	20,0%	0,7%	0,0%	5,9%	100,0%
	Budget £	47282	33041	71943	12070	27744	49409	10941	9595	23228	285253
	% Budget	16,6%	11,6%	25,2%	4,2%	9,7%	17,3%	3,8%	3,4%	8,1%	100,0%
1	Catch tonnes (BY-2)	679	533	1075	69	520	885	38	1	215	4015
1993	% catch	18,9%	13,3%	26,8%	1,7%	13,0%	22,0%	0,9%	0,0%	5,4%	100,0%
1990	Budget £	43615	36298	63464	13041	35646	53941	11487	9633	20359	267484
ī	% Budget	15,2%	12,6%	22,1%	4,5%	12,4%	18,8%	4,0%	3,4%	7,1%	100,0%
	Catch tonnes (BY-2)	470	260	1461	78	590	850	49	1	161	3920
1994	% catch	12,0%	6,6%	37,3%	2,0%	15,1%	21,7%	1,3%	0.0%	4,1%	100,0%
	Budget £	34718	23615	87112	13993	41062	54808	12460	9922	18381	296071
	% Budget	11,7%	8,0%	29,4%	4,7%	13,9%	18,5%	4,2%	3,4%	6,2%	100,0%
1	Catch tonnes (BY-2)	364	33	1288	70	656	867	56	1	140	3475
1995	% catch	10,5%	0,9%	37,1%	2,0%	18,9%	24,9%	1,6%	0,0%	4.0%	100,0%
	Budget £	32469	12171	89130	14440	50375	63314	13581	10209	18732	304421
	76 Budget	10,7%	4,0%	29,3%	17%	16,5%	20,8%	4,5%	3,4%	6,2%	100,0%
1996	Catch tonnes (BY-2)	351	6	1957		448	937	1	0	138	3837
	% catch	9,1%	0,2%	51,0%		11,7%	24,4%		0,0%	3,6%	100,0%
Ļ	Budget E	33174	13540	124103		38666	66352	1	13301	21114	310350
	76 Budget	14,7%	4,4%	40,0%		12,5%	21,4%		4,3%	0,6%	100,0%
-	Catch tonnes (BY-2)	270	/3	1657		439	839	1	0	129	3407
1997	% catch	1,9%	2,1%	48,5%	ļ	12,9%	24,6%		0,0%	3,8%	100,0%
	Budget E	31020	18251	120917	1	41973	67899	1	13520	21681	315451
	76 Dudget	3,0%	3,874	30,3%		13,3%	21,5%		4,370	0,3%	100,076
1998	Laich tonnes (BY-2)	287	92	1414		357	787	ļ	0	131	3068
	76 catch	9,4%	3,0%	40,1%		11,6%	25,7%		0,0%	4,3%	100,0%
	Budget E	33189	20/38	118/07		403/6	12242		13920	23628	324800
	Color to Duget	10,5%	0,4%	30,3%		12,4%	22,2%		4,370	1,3%	100,0%
F	Galch tonnes (BT-2)	225	59	1147		154	630	ŀ	0	111	2326
1999	% catch	9,7%	2,5%	49,3%		6,6%	27,1%	1	0,0%	4.8%	100,0%
-	Budget £	35937	19585	12/317	1	28723	74509	Ļ	13910	24587	324568
	76 Duuget	11,1%	0,0%	38,2%		8,8%	23,0%		4,376	1,0%	100,0%
H	Catch tonnes (BY-2)	149	17	1185		164	740		D	131	2385
2000	76 Catch	0,2%	U, /%	49,/%	- I	6,9%	31,0%	ŀ	0,0%	3,5%	100,0%
	Budger £	485355	13666	129991		28725	84657	Ļ	14111	20601	100 04
	76 Douget	0,170	4,876	33,3%		9,0%	23,7%		4,370	0, 76	100,070

Table 1. NASCO draft budget contributions for 1984 to 2000 based on catches two years before the budged year

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	Table 2. Grading of no	minal	cat	ches	aco	ordi	ng to	risks	ass	ociati	ed wi	th harvest, value of salmon and precision o	f statistics	
Value and risk Index	Origin of nominal salmon catch	Risk level of exploitation to wild satmon stocks				Value of salmon for spawning targets and freshwater angling exploitation			Precision of statistics			Comments	Weighted value in NASCO budget calculations	
		Excessive	High	Medium	Low	High	Medium	Low	High	Medium	Low			
5	Unreported catches	x	**************************************			x					x	Unreported catches are mixed stock fisheries, which do not respond to management action and pose a high risk to salmon stocks	1	
4	Reported marine and coastal catches		x			x				x		Reported marine an coastal fisheries are mixed stock fisheries, which partly respond to management actions and can pose a threat to salmon stocks	1/2	
3	Reported freshwater catches			x		x			x			Reported freshwater catches are controlled terminal fisheries with relatively low management risk and are a minor threat to salmon stocks.	1/3	
2	Reported "catch and release"				x		x		x			Reported "catch and release" is a management oriented exploitation method, which poses low risk to salmon stocks.	1/4	
1	Private ranching production				x			x	x			Ranching is an aquaculture practice, which harvests salmon in a terminal freshwater ranching station and poses low risk to wild salmon abundance	1/5	