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ADP Developments in the STATLANT Forms NS, A and B

by

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ADP DEVELOPMENTS IN THE STATLANT FORMS NS, A AND B

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## 1. INTRODUCTION

- 1.1 Following the Expert Meeting on Fishery Statistics in the North Atlantic Area held in Edinburgh 22-29 September 1959, ICNAF, ICES and FAO introduced standardized questionnaires to obtain catch and effort statistics. These significantly reduced the work in national offices for reporting annual data to these Agencies. Originally this system was confined to the North Atlantic under the code name STANA but was subsequently extended to all other fishing areas of the Atlantic; this expanded Atlantic statistical programme is known now as STATLANT and this is also used to identify the various standardized forms.
- 1.2 The original forms developed first under the STANA system and subsequently renamed STATLANT were designed to cope specifically with national and agency offices producing manually statistical tabulations. Through these a great deal of experience in standardization of statistical concepts, codes, definitions and classifications was gained. Furthermore, under this system the growing amount of data reported by the national focal points made it eventually imperative to introduce automatic data processing systems. Some countries already found the reporting of their data so voluminous that they already confined the submission of annual statistical reports to agencies to computer printouts. The need to introduce ADP methods became obvious not only because of the amount of data but also because of the growing need for up-to-date details to deal with the urgently expanding issues and problems in the intergovernmental management of regional fishery stocks.
- 1.3 The various developments and trends mentioned in the previous paragraph made it necessary to review the existing forms originally designed for manual use and to redesign them to facilitate also the completion of returns received by the agencies already utilizing automatic data processes. This required precoded forms designed to facilitate card-punching and input into the data banks maintained by the various agencies responsible for the various Atlantic fisheries. At the same time the forms had to allow for completion by nationally maintained manual procedures and insertion of the figures for submission to the agencies. It is expected that eventually the forms will disappear when all countries use computer printouts in submitting reports to the agencies.
- 1.4 In the subsequent sections of this paper these new developments towards an eventual complete computerization of the system, while still retaining methods for manual reporting, are outlined.

## 2. STATLANT NS

- 2.1 The purpose of this form is described in Section 1 of Fishery Circular No 422, Rev.2, FAO, December 1974, which provides the notes for its completion as follows:-
  - "1.1 This form is to be used by national offices for reporting, each year, nominal catch data on all commercial, industrial and subsistence fishing operations in all inland (freshwater or brackishwater) and marine (saltwater) fishing areas.
  - 1.2 For all nationally available species items of aquatic animals and plants the particulars of the annual data (on a calendar year basis) to be reported are as follows:-
    - NOMINAL CATCHES (live weight equivalent of the landings) by species items, during recent calendar years with breakdowns by fishing areas."
- 2.2 The form is described in Section 2 of the aforementioned Circular as follows:-
  - "2.1 Description of form STATLANT NS

This form consists of one or more computer-printed sheets on which appear

    - (a) the relevant species items (international descriptors and national local names);
    - (b) the relevant fishing areas defined by means of the two-digit codes;

(c) final or provisional annual nominal catch data, previously reported to FAO, for one or more recent years;

(d) blank columns for the insertion of nominal catch data not yet available to FAO."

2.3 Annex 1 to this paper presents an extract of one of the computer printed prefilled pages taken from one of the STATLANT NS forms submitted to reporting countries (in this case Norway). It will be noticed that each of the STATLANT forms is custom-tailored for each country to reflect its (a) species caught and (b) the areas fished.

2.4 To facilitate and ensure accurate reporting, the species items for each country are identified not only by the FAO English, French and Spanish common names but also by the scientific binomials of the species or genus or family together with its appropriate international taxonomic code. In addition, following the first column in which all these descriptors appear, the second column lists, in brackets, the names of the species items in the official language of the particular country. For example it will be noticed on the page represented in Annex 1 which has been extracted from the NS form for Norway the Norwegian names for the species are shown in parentheses to facilitate the task of a local official completing the form.

2.5 Early in 1975 countries were asked to revise, on these computer-printed NS forms, the figures for the years 1970-73 and to round these figures off to the nearest 100 metric tons; the data will be shown rounded off by using two zeros. Beginning with 1974 all subsequent years will be shown to the nearest metric ton. Countries are also asked to insert new fishing areas and new species items where recent fishery developments require these additions.

2.6 Revisions and additions to the data reported to FAO on these computer forms are then, with a minimum of time and after editing, sent for card-punching and incorporation in the FAO fishery statistics data bank. It will be noticed that this task is facilitated by these computer-printed questionnaires which are not only "prefilled" but also precoded.

### 3. STATLANT A

3.1 The purpose of this form is explained in Section 1 of the various Fishery Circulars providing notes for completion of STATLANT A forms for

Fishing Area 21	Northwest Atlantic	ICNAF	Circular No. 442
27	Northeast Atlantic	ICES	444
31	Western Central Atlantic	WECAFC	not yet issued
34	Eastern Central Atlantic	CECAF	462
37	Mediterranean and Black Sea	GFCM	472
41	Southwest Atlantic	CARPAS	482
47	Southeast Atlantic	ICSEAF	492

3.2 The forms are used by national offices for reporting each year nominal catch data on all commercial, industrial and subsistence fishing activities in each fishing area with a breakdown by species items and by subarea and/or division.

3.3 Up to and including 1975 the forms used consisted of a number of sheets on which had been inserted vertical strips listing the species items in column C and horizontal strips across each of the columns to list the fishing areas. In some cases 16 sheets are required to cover all the areas and species items. 1974 nominal catch data are still to be reported during 1975 on these sheets.

3.4 It is, however, now proposed to replace these forms by computer printouts which could be tailored to suit the needs of groups of countries reporting data in various detail on their activities in terms of catch by species and subareas and divisions for the various Atlantic fishing areas. It is obvious that coastal countries adjoining a fishing area would have a larger number of species items to be covered while those with long-distance fleets and operating further offshore might have much more restricted lists and might confine their activities to certain types of fisheries and fish stocks.

3.5 Annex 2 represents the new type of form which we propose to issue; it will be printed by computer. It would consist of a number of consecutive sheets from the computer on which would be listed, vertically, close to the lefthand margin, the various fishing areas (subareas and divisions) within each major fishing area.

3.6 Across the top in the column heads would appear the following descriptors of species items:

- (i) the FAO English or French or Spanish names;
- (ii) the local common name;
- (iii) scientific name(s);
- (iv) the FAO and ICNAF species item codes.

The computer printouts could be confined to the list of species appearing on the STATLANT B forms or could be expanded to ensure that species from that fishing area are included or represent a new list of species in detail somewhere between the restricted B list and the complete list on the NS forms. This decision should be taken by each regional commission. It is also possible to programme the computer to provide for each country its own list (extracted from the main regional one) to include (a) all the species items on the B forms and (b) all other species caught by that country in that fishing area during the preceding three years. ICNAF may wish to have all TAC species listed in the column heads of the various sheets constituting a country's STATLANT 21 form. If the total list of species items is not printed several blank pages with the subareas and divisions vertically arranged in the lefthand column must also be supplied so that any country could add those additional catches of species items not appearing in the column headings.

3.7 According to the tables in Volume 36 of the FAO Yearbook of Fishery Statistics 138 ICNAF species have been reported by the different countries. The non-coastal countries report catches of 58 species out of the 138 total. In the case of ICNAF two coastal countries, USA and Canada, do not report on STATLANT 21A forms but use computer printouts. The computer printed 21A form would be used by the non-coastal countries to list in the column heads the 58 species items caught by them. It is possible to accommodate these in 10 consecutive sheets together with another three or four sheets with blank column heads for countries to insert additional species according to their experience.

3.8 It should be noticed that provision is made for both FAO codes and agency (ICNAF) codes to appear on these forms. These preprinted country, area and species codes would facilitate card-punching and suffixes and prefixes could be used by an agency as it sees fit to prepare for any kind of grouping.

#### 4. STATLANT B FORMS

4.1 Following the discussions at the 8th Session of the CWP, 12-20 September 1974, Paris, it is now possible to revise this form in a fashion that would facilitate computer-processing of the data. Provision is made for the coding of the document before and after its transmission to the international agency. Both practices would facilitate and expedite card-punching of data.

4.2 Annex 3 shows a new draft for STATLANT 21B to be used by ICNAF. The other version in Annex 4 shows the general frame of the STATLANT B form to be used by ICES, CARPAS, GFCM, CECAF, WECAFC and ICSEAF. It should be noted that different species lists are to be printed in STATLANT 21B (ICNAF), 27B (ICES), 31B (WECAFC), 34B (CECAF), 37B (GFCM), 41B (CARPAS) and 47B (ICSEAF).

4.3 It should be noticed that provision will be made for both FAO and agency codes to appear on these forms. This would facilitate card-punching and suffixes and prefixes could be used by agencies and FAO as they see fit.

4.4 A decision must be taken about (a) the selected species items to be printed in column C of the B form, (b) their arrangement and (c) the location of any blank lines left for insertion by national reporting offices of additional species.

4.5 The groupings and arrangement of items is no longer so important as these could be achieved in various ways by ADP procedures.

4.6 A single block of lines could be left blank for insertions instead of leaving selected lines blank.

4.7 The printed species list could be that selected for inclusion in the earlier 21B forms or an expanded version.

Annex 1

SAMPLE PAGE EXTRACTED FROM COMPUTER PRINTED STATILANT NS SUBMITTED TO NORWAY EARLY 1975

DATE 09/12/74		COUNTRY - NORWAY		PAYS - NORVEGE		NOMINAL CATCH (METRIC TONS)					
SPECIES ITEM		LOCAL NAME	AREA	CAPTURES NOMINALES (TONNES METRIQUES)		1971		1972		1973	1974
CATEGORIE D'ESPECE		NON LOCAL	ZONE	1970	1971	1972	1973	1974			
EN	CUR PLEIN EEL	026 AL	27S	400	400	400	400	400			
FR	ANGUILLE EUROPEENNE										
SC	ANGUILLA ANGUILLA										
TC	1,83(02)002,01										
EN	ATLANTIC SALMON	035 LAKS	S	1200	1500	1800	2000	2000			
FR	SAUMON DE L'ATLANTIQUE										
SC	SALMO SALAR										
TC	1,23(01)004,01										
EN	TROUTS	037 SJOAURE	27S	...	...	...	...	...			
FR	TRUITES										
SC	SALMO SPP.										
TC	1,23(01)004										
EN	CAPELIN	048 LODDE	S	1301000	1371200	1556400	1332100	1332100			
FR	CAPELAN										
SC	MALLOTUS VILLOSUM										
TC	1,23(04)002,01										
EN	ATLANTIC ARGENTINES (=SILVER SMELTS)	056 STROMSILD, VASSILD	27S	300	100	100	100	100			
FR	ARGENTINES DE L'ATLANTIQUE										
SC	ARGENTINA SPHYRAENA ARGENTINA SILUS										
TC	1,23(05)015										
EN	ATLANTIC HALIBUT	087 KVEITE	S	2700	2500	2000	2000	2000			
FR	FLETAN DE L'ATLANTIQUE										
SC	HIPPOGLOSSUS HIPPOGLOSSUS										
TC	1,83(02)002,01										
EN	EUROPEAN PLAICE	089 ROOSPETTE	27S	800	500	600	700	700			
FR	PLIEF EUROPEENNE										
SC	PLFUNGECTES PLATESSA										
TC	1,83(02)004,05										
EN	GREENLAND (=BLACK) HALIBUT	090 BLARVETTE	S	16200	11000	17600	15300	15300			
FR	FLETAN NOIR										
SC	PEIMHARDTIUS HIPPOGLOSSOIDES										
TC	1,83(02)005,01										
EN	WITCH	092 SMOR-FLYNDRE	27S	00	00	00	100	100			
FR	PLIEF BRISE										
SC	GLYPTOCEPHALUS CYNOGLOSSUS										
TC	1,83(02)011,02										

SAMPLE PAGE OF PROPOSED COMPUTER PRINTED STATLANT 21A FOR NORWAY

STATLANT 21A: NOMINAL CATCHES IN AREA 21 (M.TONS)		YEAR: 197	FAO: NORWAY (578)	ICNAF: NOR (15)				
ICNAF	SUBAREA	GRANDTOTAL	TUSK (=CUSK)	ATLANTIC COD	NORTH ATL. REDFISH	ATLANTIC HERRING	PORBEAGLE	ATLANTIC HALIBUT
SUBAREAS	DIVISION	ALL SPECIES	BROSME	TORSK	UER	SIID	HABRANN	KVEITE
DIVISIONS	CODES	FROM AREA 21	BROSME	GADUS MORHUA	SEBASTES MARINUS	CLUPEA HARENGUS	LAWNA NASUS	HIPPOGLOSSUS
NUMBERS	FAO	ICNAF	112	113	314	398	485	087
			FAO-ICNAF	FAO-ICNAF	FAO-ICNAF	FAO-ICNAF	FAO-ICNAF	FAO-ICNAF
BAFFIN IS		09						
1A	21.1.1	11						
1B	21.1.2	12						
1C	21.1.3	13						
1D	21.1.4	14						
1E	21.1.5	15						
1F	21.1.6	16						
1NK	21.1.9	19						
2G	21.2.1	21						
2H	21.2.2	22						
2J	21.2.3	23						
2NK	21.2.9	29						
3K	21.3.1	31						
3L	21.3.2	32						
3M	21.3.3	33						
3N	21.3.4	34						
3O	21.3.6	35						
3Pa	21.3.6	36						
3Ps	21.3.7	37						
3NK	21.3.9	39						
4R	21.4.1	41						
4S	21.4.2	42						
4T	21.4.3	43						
4V <sup>n</sup>	21.4.4	44						
4V <sup>s</sup>	21.4.5	45						
4W	21.4.6	46						
4X	21.4.7	47						
4NK	21.4.9	49						
5Y	21.5.1	51						
5Ze	21.5.2	52						
5Z <sup>w</sup>	21.5.3	53						
5NK	21.5.9	59						
6A	21.6.1	61						
6B	21.6.2	62						
6C	21.6.3	63						
6D	21.6.4	64						
6E	21.6.5	65						
6F	21.6.6	66						
6G	21.6.7	67						
6H	21.6.8	68						
6NK	21.6.9	69						

21 TOTAL





Annex 4

ICES/CMP FORM FOR REPORTING NOMINAL CATCHES AND THE CORRESPONDING FISHING EFFORT (Draft: May 1975)

STATLANT 27E

A LINE	B FAO Code	C EFFORT AND SPECIES ITEMS	D ICES code	E TOTAL	F JANUARY	G FEBRUARY	H MARCH	I APRIL	J MAY	K JUNE	L JULY	M AUGUST	N SEPTEMBER	O OCTOBER	P NOVEMBER	Q DECEMBER	R MONTH NOT KNOWN	K Sheet No. of sheets	
																			a) Year

**FISHING EFFORT MEASURES**

LINE	ICES code	TOTAL	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	MONTH NOT KNOWN
0															
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															

**NOMINAL CATCHES (LIVE WEIGHT, i.e. ROUND FRESH WEIGHT EQUIVALENT OF THE LANDINGS - IN METRIC TONS)**

LINE	Species	TOTAL	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	MONTH NOT KNOWN
11	GRAND TOTAL														
12	* Capelin														
13	* Plaice (European)														
14	* Sole (common)														
15	* Cod														
16	* Haddock														
17	* Hake														
18	* Norway pout														
19	* Polar cod														
20	* Saithe														
21	* Whiting														
22	* Redfishes														
23	* Sandeels														
24	* Herring														
25	* Sprat														
26	* Mackerels														
27	* Piked dogfish														
28	Atlantic salmon														
29	Smelt (European)														
30	Brill														
31	Gab (common)														
32	Flounder (European)														
33	Halibut														
34	Greenland halibut														
35	Lemon sole														
36	Hegrim														
37	Turbot														
38	Witch														
39	Ling														
40	Pollack														
41	Tusk														
42	Catfishes (wolfishes)														
43	Conger eel														
44	Gurnards														
45	Monk														
46	Sea breams														
47	Garfish														
48	Horse mackerel														
49	Pilchard														
50	Albacore														
51	Bluefin tuna														
52	Bonito														
53	Dogfishes, hounds, etc.														
54	Rays and skates														
55	Norway lobster														
56	Pandalid shrimp														
57															
58															
59															
60															
61															
62															
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