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(A.c.1)

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Major CWP Recommendations of Direct Importance to ICNAF

by Assistant Executive Secretary

1. Review of definition of effort concept "number of days on ground".

In response to a request of the ICNAF Working Group on Effort Limitation, which met at Woods Hole, USA, in March 1973, the CWP reviewed the definition of the effort unit "days on ground", which is currently defined in FAO Fisheries Circular No. 429 as "*the number of days (24-hour periods, reckoned from midnight to midnight) during which the vessel was on the fishing ground, including, in addition to fishing and searching, all other days while the vessel was on the ground.*" As a basis for the discussion, the CWP considered the views of several countries whose comments had earlier been solicited by the CWP Secretary.

The use of the "days on ground" concept for regulatory purposes presents a number of problems. It was noted that the term "fishing ground" could take on different meanings for fisheries on groundfish *versus* pelagic species. Moreover, very large management areas might require extensive transit operations when migration patterns are pronounced, a condition of much lesser importance for small stock areas. Thus a major problem is how to treat the time components related to transit over and between fishing grounds. It was felt that such problems could probably be best handled on a regional basis.

Accordingly, the CWP felt that the current definition of "days on ground", as set forth in FAO Fisheries Circular No. 429, was adequate for the purpose for which it was initially defined, and that each Commission should define the concept "fishing ground" within its own management regime, when requiring the collection of "days on ground" statistics for purposes of management on an effort basis.

2. Effort units by gear categories (Appendix I)

In considering ICNAF's request for an extension of the effort measures to cover fisheries by such gears as gillnets, the CWP decided to review the effort units which could be applied to most of the major gears in the ISSCFG\* categories. The complete list is given in Appendix 7 of FAO Fisheries Report No. 156, entitled "Report of the 8th Session of the Coordinating Working Party on Atlantic Fishery Statistics, Paris, France, 12-20 September 1974." The CWP recognized that there was a need for further research to determine the best effort units for some gear categories, but, pending the determination of better definitions, nevertheless recommended that the regional agencies should select from the proposed FAO list those fishing effort units most appropriate for statistical reporting in their respective areas.

Since ICNAF has generally required the reporting of 3 effort units in recent years, namely "hours fished", "days fished", and "days on ground", those effort units for the various gears which are relevant to the ICNAF requirements are listed in Appendix I to this document. While more precise definitions of certain of the first level effort units are given than were previously available, no changes are recommended for the previously defined concepts "days fished" and "days on ground".

3. Proposed international standard abbreviations for gear categories (Appendix II)

To aid the users of statistical publications of the different regional agencies, it was considered necessary to agree upon a harmonized list of international abbreviations or character codes for the different gear categories. The CWP reviewed those now used by the different agencies and proposed a list of such abbreviations for adoption by the regional agencies in their statistical publications. The abbreviations recommended by the CWP, together with those currently used by ICNAF, are given in Appendix II.

4. Revision of STATLANT Form B (Appendix III)

In reviewing the STATLANT forms used for the reporting of national fisheries statistics to regional agencies, the CWP considered the requirements of ICNAF to develop a STATLANT B form suitable for the reporting of catch and effort statistics by twice-monthly time periods for small unit areas (see ICNAF Redbook 1974, page 70), as well as for the direct punching of the data to cards or magnetic tape.

\* FAO International Standard Statistical Classification of Fishing Gear

A modified version of the existing STATLANT Form B was drawn up, keeping in mind the differing regional requirements regarding the detail of statistical reporting and the ordering of the species items to be pre-printed on the form. A draft version of the new STATLANT 21B Form (Northwest Atlantic) proposed for use in soliciting statistics for the year 1975 is at Appendix III. The major provisions are given below.

(a) Heading boxes to be arranged as follows:

- A. Year (with "19\_\_" preprinted)
- B. Time period key
- C. Country
- D. Fishing gear (method)
- E. Vessel type
- F. Vessel size
- G. Main species sought
- H. FAO Statistical Area (21 for ICNAF Area)
- I. Regional subarea-division-subdivision names
- J. Regional quadrangular unit areas (if desired)
- K. Source (office use only)
- L. Sheet No. \_\_\_\_ of \_\_\_\_ sheets

(b) Provision of special boxes for use in coding A to K above.

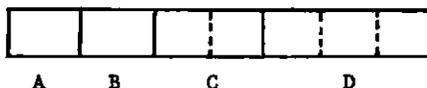
(c) Provision for reporting bi-monthly statistics.

(d) Provision for pre-printing species items and codes as required by regional agencies.

#### 5. Quadrangular systems codification

At the 7th session of the CWP in 1971, a system of coding quadrangular unit areas utilizing the latitude/longitude grid system was recommended for use by international agencies, and ICCAT subsequently adopted the system at least for areas of 5° quadrangles.

The CWP considered the need for standardizing the codes for reporting systems in the Atlantic, and once again recommended that all regional agencies should adopt the system to identify quadrangles as small as 1° x 1°. The structure of a code for identifying the size and location of unit quadrangles down to 1° x 1° anywhere in the world can be represented by a 7-digit number as follows:

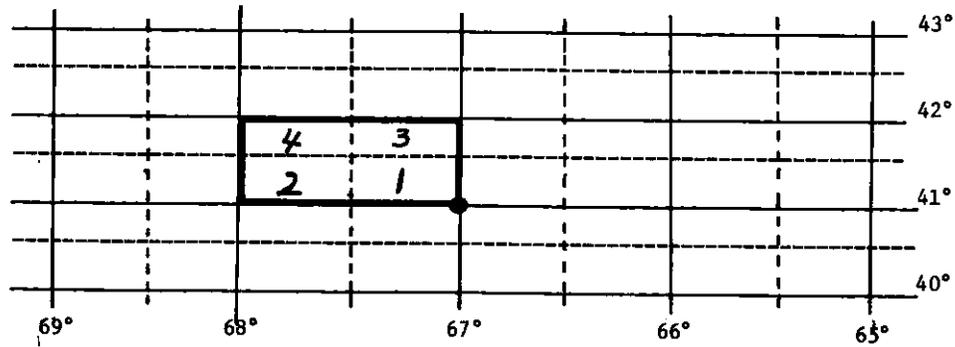


where A = size of unit quadrangle,  
B = world quadrant (with division lines at the equator and the prime meridian),  
C = latitude identifying unit quadrangle, and  
D = longitude identifying unit quadrangle.

An extension of the above system to accommodate the identification of unit quadrangles smaller than 1° x 1° may be achieved in several ways. One way would be to extend the code by 4 digits by the addition of the "minute" designations to both the latitude and longitude coordinates. A simplification of this procedure would be the addition of one or two digits to the code given in the preceding paragraph depending on the number of unit areas in each 1° x 1° quadrangle.

For the 30' x 30' unit area, proposed by ICNAF for certain parts of the Northwest Atlantic, codes for C and D would identify the 1° x 1° quadrangle and an additional digit E would indicate the position of each 30' x 30' unit area within each 1° x 1° quadrangle.

For ICNAF purposes, since only one size of unit area is proposed (i.e. 30' x 30') and since the Northwest Atlantic Fishing Area is contained entirely within a single world quadrant, A and B above could be omitted and the ICNAF quadrangular code could thus be reduced to 5 digits (i.e. 2 for latitude, 2 for longitude, and 1 for position of 30' x 30' unit area within 1° quadrangle).



In the foregoing diagram the four 30' x 30' unit areas contained within the designated 1° quadrangle may be defined as follows:

- (a) The latitude and longitude coordinates are determined for the 1° quadrangle by lower right-hand corner (i.e. the corner nearest the 0° latitude and 0° longitude coordinates).
- (b) The positions of the 30' x 30' unit areas would be designated by the numbers 1, 2, 3 and 4, always in the order shown in the diagram for the ICNAF Area.
- (c) The codes for the four unit areas would thus be 41671, 41672, 41673 and 41674 respectively. A code of 41670 would indicate that the data are given by the 1° quadrangle only.

It is important to note that, since many of the boundaries between ICNAF divisions and subdivisions do not coincide with the degree lines of latitude and longitude, the ICNAF division (or subdivision where applicable) must also be given on the STATLANT 21B form, when catch and effort statistics are reported by quadrangular units.

References

FAO. 1972. Report of the seventh session of the Coordinating Working Party on Atlantic Fishery Statistics, Rome, Italy, 10 - 16 November 1971. FAO Fish. Rep. No. 121: 46 p.

FAO. 1974. Report of the eighth session of the Coordinating Working Party on Atlantic Fishery Statistics, Paris, France, 12 - 20 September 1974. FAO Fish. Rep. No. 156: 39 p.



APPENDIX I. Effort measures by ICNAF gear categories (see also notes following the Table)

GEAR	EFFORT MEASURES	DEFINITION
Trawls	1. No. of hours fished	Number of hours during which the trawl was in the water (pelagic trawl), or on the bottom (bottom trawl), and fishing.
	2. No. of days fished	
	3. No. of days on grounds	
Boat seines (Danish seine, etc.)	1. No. of hours fished	Number of hours during which the seine was on the bottom and fishing.
	2. No. of days fished	
	3. No. of days on grounds	
Boat dredges	1. No. of hours fished	Number of hours during which the dredge was on the bottom and fishing.
	2. No. of days fished	
	3. No. of days on grounds	
Beach seines	1. No. of sets	Number of times the gear has been set or shot, whether or not a catch was made.
	2. No. of days fished	
	3. No. of days on grounds	
Surrounding nets (purse seine, etc.)	1. No. of sets	Number of times the gear has been set or shot, whether or not a catch was made.
	2. No. of days fished	
	3. No. of days on grounds	
Gillnets (set or drift)	1. No. of effort units	Length of nets expressed in 100-metre units multiplied by the number of sets made (= accumulated total length; in metres, of nets used in a given time period divided by 100).
	2. No. of days fished	
	3. No. of days on grounds	
Gillnets (fixed)	1. No. of effort units	Length of net expressed in 100-metre units multiplied by the number of times the net was cleared.
	2. No. of days fished	
	3. No. of days on grounds	
Traps (uncovered pound nets)*	1. No. of effort units	Number of days fished times the number of units hauled.
	2. No. of days fished	
	3. ---	
Traps (pots and fyke nets)	1. No. of effort units	Number of lifts times the number of units (= total number of units fished in a given time period).
	2. No. of days fished	
	3. ---	



APPENDIX I (cont'd)

GEAR	EFFORT MEASURES	DEFINITION
Lines (set or drift longlines)	1. thousands of hooks	Number of hooks fished in a given time period divided by 1000.
	2. No. of days fished	
	3. No. of days grounds	
Handlines (pole, troll, jig lines)	1. No. of line-days	
	2. No. of days fished	
	3. ---	
Harpoons	1. ---	
	2. No. of days fished	
	3. No. of days on grounds	

\* Please note that the gear group "TRAPS" has been divided into two major categories "Uncovered pound nets" and "Pots and fyke nets", in order to separate two distinctly different types of gear.

NOTE: The effort measures "no. of days fished" and "no. of days on grounds" for the gears listed above are defined in FAO Fisheries Circular No. 429 as follows:

- (a) No. of days fished. The number of days (24-hour periods, reckoned from midnight to midnight) on which any fishing took place. For those fisheries in which searching is a substantial part of the fishing operation, days on grounds in which searching but not fishing took place should be included in "days fished" data.

Taking into account the inclusion of searching time, the definition of "no. of days fished" could be further refined at the national level as follows: The number of days (24-hour periods, reckoned from midnight to midnight) on which the fishing craft was on the fishing grounds intent on catching fish (not counting the time spent steaming to or from port and between grounds) minus the number of fishing days lost through delays from weather, breakdown or other factors".

- (b) No. of days on grounds. This is defined as the number of days (24-hour periods, reckoned from midnight to midnight) in which the craft was on the fishing ground, and includes in addition to the days fishing and searching also all the other days while the craft was on the ground.



APPENDIX II. Proposed international abbreviations for gear categories (together with those used by ICNAF)

GEAR CATEGORIES	RECOMMENDED BY CWP	NOW USED BY ICNAF
<u>SURROUNDING NETS</u>		
With purse lines	PS	PS
- one boat	PS1	
- two boats	PS2	
Without purse lines (lampara)	LA	
<u>SEINE NETS</u>		
Beach seines	SB	BS
Boat or vessel seines	SV	
- Danish seines	SDN	DS
- Scottish seines	SSC	SS
- Pair seines	SPR	PRS
<u>TRAWLS</u>		
Bottom trawls (general)	TB	
- beam trawls	TBB	
- otter trawls	OTB	OT (SI or SN)
- pair trawls	PTB	PTB
Midwater trawls (general)	TM	
- otter trawls	OTM	MT (SI or SN)
- pair trawls	PTM	PTM
Otter trawls (not specified)	OT	OT
Pair trawls (not specified)	PT	PT
Other trawls	TX	
- shrimp trawl		ST
<u>DREDGES</u>		
Boat dredges	DRB	DRE
Hand dredges	DRH	
<u>GILLNETS AND ENTANGLING NETS</u>		
Gillnets (not specified)	.	GN
Set gillnets	GNS	GNS
Drift gillnets	GND	GND
Encircling drive-in nets	GNC	
<u>TRAPS</u>		
Traps (not specified)		FIX
Stationary uncovered pound-nets	FPN	TRA
Covered pots and fyke nets	FPF	
- covered pots	FPO	POT
- fyke nets	FYK	
Stow-nets	FSN	
Barriers, fences, weirs, etc.	FWR	WR
Aerial traps	FAR	
<u>HOOKS AND LINES</u>		
Hand-lines and pole-lines	LHP	HL
Hand-lines and pole-lines (mechanized)	LHM	
Set lines (longlines set)	LLS	LLS
Drift lines (longlines drift)	LLD	LLD
Longlines (not specified)		LL
Troll lines	LTL	TL
Dory vessel gears		DV



APPENDIX II (cont'd.)

<u>GEAR CATEGORIES</u>	<u>RECOMMENDED BY CWP</u>	<u>NOW USED BY ICNAP</u>
<u>LIFT NETS</u>	LN	
<u>FALLING GEAR</u>	FG	
<u>GRAPPLING AND WOUNDING</u>		
Harpoons	HAR	HAR
<u>HARVESTING MACHINES</u>		
Pumps	HMP	
Mechanized dredges	HMD	
Other appliances	HMX	
<u>MISCELLANEOUS GEARS</u>		MISC
<u>GEAR NOT KNOWN OR NOT SPECIFIED</u>	NK	NK



APPENDIX III. Proposals for STATLANT B FORM

The ICNAF proposal for a modified STATLANT B Form is shown below. This is essentially the same as the CWP proposal (overleaf) except for the method of reporting statistics by twice-monthly time periods.

(14) 19--	<input type="checkbox"/> Jan-Dec <input type="checkbox"/> Jan-Jun <input type="checkbox"/> Jul-Dec	(15)	(16)	(17)	(18)	(19) 21	(20)	(21)	Sheet No. _____
Year	COUNTRY	FISHING GEAR	VESSEL TYPE	TONN. CLASS	MAIN SPECIES	FAD AREA	ICNAF DIV.	QUADRANGULAR UNIT AREA	of _____ sheets

ICNAF/CWP FORM FOR REPORTING STATISTICS ON FISHING EFFORT AND NOMINAL CATCHES STATLANT 21B

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
LINE	FAD CODE	EFFORT AND SPECIES	TUNN. (1000)	Jan (1) Jul (1)	Feb (1) Jul (1)	Mar (1) Aug (1)	Apr (1) Aug (1)	May (1) Sep (1)	Jun (1) Sep (1)	Jul (1) Oct (1)	Aug (1) Oct (1)	Sep (1) Nov (1)	Oct (1) Nov (1)	Nov (1) Dec (1)	Dec (1) Dec (1)	NOT KNOWN	TOTAL	W Σ

FISHING EFFORT MEASURES

1	No. of hauls Sifted	160																
2	No. of days Sifted	161																
3	No. of days on ground	162																

NOMINAL CATCHES (Live weight, i.e. round flesh weight equivalent of the landings) IN METRIC TONS

LINE	DESCRIPTION	CODE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
6	GRAND TOTAL														
7	GROUND FISH														
8	Cod	001													
9	Haddock	002													
10	Redfish	003													
11	Silver Hake	005													
12	Red Hake	006													
13	Pollock	007													
14	American Plaice	010													
15	Witch	011													
16	Yellowtail	012													
17	Greenland Halibut	013													
18	Winter Flounder	014													
19	Summer Flounder	015													
20	Atlantic Halibut	016													
21	Flounders (not specified)	019													
22	Roundnose Grenadier	029													
29	Groundfish (not specified)	044													
30	PELAGIC FISH														
31	Herring	045													
32	Mackerel	046													
37	Pelagics (not specified)	069													
39	OTHER FISH														
40	Argentine	072													
41	Capelin	079													
42	Salmon	095													
49	Other fish (not specified)	119													
51	CRUSTACEANS														
52	Lobster	127													
53	Shrimps (Praona)	128													
57	Crustaceans (not specified)	129													
58	MOLLUSCS														
59	Scallop, sea	139													
60	Squids (not specified)	146													
61	Squid - Loligo	147													
62	Squid - Illex	148													
67	Molluscs (not specified)	149													
68	OTHER INVERTEBRATES														
71	Invertebrates (not specified)	159													
72	SEAWEEDS	151													
73	MISCELLANEOUS AQUATIC ANIMALS														

(3840)

APPENDIX III. (cont'd)

PROFORMA FOR A MODIFIED STATANT B FORM

(a) YEAR	(b) TIME PERIOD	(c) COUNTRY	(d) FISHING GEAR/METHOD	(e) VESSEL TYPE	(f) VESSEL SIZE	(g) MAIN SPECIES SOUGHT	(h) FAO AREA	(i) SUB-AREA	(j) QUADRANGULAR AREA	(k) SOURCE For office use only	(l) Sheet No. of Sheets
19											

STATANT (1) '80

AGENCY (1) / CRP FORM FOR REPORTING STATISTICS ON FISHING EFFORT AND CORRESPONDING NOMINAL CATCH

FAO CODE	EFFORT/SPECIES ITEMS	AGENCY CODE (1)	TOTAL	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	NOT ENTERED
08	FISHING EFFORT MEASURES															
08	HOURS FISHED	E.g.														
08	DAYS FISHED	E.g.														
08	DAYS ON GROUNDS	E.g.														

FAO CODE	NOMINAL CATCH (METRIC TONS)	AGENCY CODE (1)	TOTAL	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	NOT ENTERED
22/005	Atlantic salmon <i>Salmo salar</i>	S11														
32/113	Atlantic cod <i>Gadus morhua</i>	S12														
35/398	Atlantic herring <i>Clupea harengus</i>	S12														
	TOTAL															

1/ The coding reservation can appear either coloured within header boxes or on a continuous strip below the boxes, as preferred by a particular agency.

NOTE: (1) specifies the agency name

(1') is the FAO code for the area in which agency (1) is primarily interested.

E<sub>11</sub> is the code of P<sup>th</sup> effort measure of the 1<sup>th</sup> agency.

S<sub>11</sub> is the code of 1<sup>th</sup> species item of the 1<sup>th</sup> agency.

