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COORDINATING WORKING PARTY ON FISHERY STATISTICS

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Report by FAO

Agenda item 6: Inter-sessional developments in agency programmes in fishery statistics

Databases and yearbooks

The FAO databases on capture, aquaculture, commodities production and trade of fishery products have been updated with 2000 data and work is under way to complete the 2001 statistics, which are expected to be released at about March 2003. Regional capture databases (i.e. CECAF, GFCM, and ex-ICSEAF area) follow the same schedule with only a few months of delay.

After a two-year intermission, a new issue of the FAO Fisheries Circular No. 821 ("Fish and fishery products: World apparent consumption statistics based on food balance sheets"), covering the 1961-1999 period, has been published.

The last issue of the Bulletin of fishery fleet statistics was published in 1998 for data years up to 1995. FAO subsequently changed the basis of its fleet statistics from GRT (or GT) to length overall (LOA) and changed the ISSCFV classification used as a basis for the inquiry; changes endorsed by CWP-18 and CWP-19, respectively. These changes caused disruptions in the time series and delays in country reporting using the new system and in processing the statistics at FAO. Even with the simplified questionnaire, returns of the questionnaires by countries remains poor. However, although the coverage of data is partial and some of them are still under scrutiny, the fishing fleet database from 1996 to 1998 has been finalized both for decked and undecked vessels and these will be published in 2003, albeit with a revised structure due to the breaks in the time series due to the changes mentioned above.

At present, work for the next issue of the FAO Fisheries Circular No. 929 ("Number of fishers, 1970-2000"), is in progress.

The backward separation of the aquaculture and capture production has now been accomplished for the 1950-69 period. From the next releases, both the aquaculture and capture production databases will be disseminated completely separated for the whole 1950-2001 period.

The extension of dissemination of STATLANT A data in FISHSTAT continued with the incorporation of data for the Southeast Atlantic (former ICSEAF area) for 1975-2000 and the preparation of data for the Red Sea and Gulf for 1986-2000.

The revision of the ISSCAAP groups has been implemented in the first release (March 2002) of the FAO capture and aquaculture production databases following CWP-19 and, on the occasion of the publication of the ASFIS list, ISSCAAP codes have been assigned to all species items included in the list. The FAO fishery commodities classification has been modified in order to re-align it to the revised ISSCAAP groups and it has also been expanded to include about 20 new commodities.

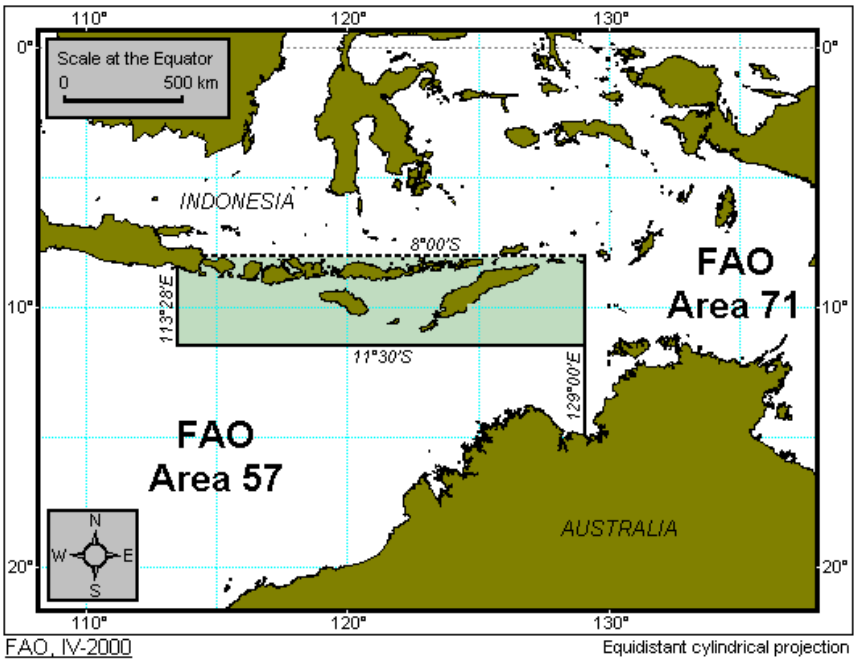
Procedures for the preparation of the FAO capture and aquaculture yearbooks starting from databases located on the Oracle platform and based on XML/XSL standards have been completed, although the full system in the Oracle environment is still under construction.

Indexes of FAO English, French, Spanish and scientific names have been added to the capture and aquaculture yearbooks to facilitate access to the species items in the publications given the continuously increasing number of species items included (1,255 and 380 respectively in the capture and aquaculture yearbooks).

The FAO yearbook of fishery commodities has been also upgraded. A new table on "The relative importance of trade of fishery products in 2000" has been added, the Appendix II "Fishery production: estimated value by groups of species" modified, and the section "Fishery commodities: production, imports and exports by countries" revised with the addition of 12 new tables following the changes made to the FAO fishery commodities classification.

Changes in fishing area boundaries

The change in the statistical boundary between fishing areas 57 and 71 in the Australian-Indonesian region, is being implemented according to the borders shown in Appendix 5, Figure 3 of the CWP-17 Report (see figure below). The current boundary at 11º 30' S will be moved northwards to 8º S and the eastwards border will be kept at 129º E. Indonesia has provided a first release (backwards to 1975) of its capture statistics in areas 57 and 71 revised according to the new border. These preliminary data will be included in the next release of the capture database (March 2003); the final data will be provided later in 2003.



Electronic questionnaires

During the inter-sessional period, the number of national correspondents utilizing electronic questionnaires to return fishery statistics to FAO has greatly improved. The table below shows the media used by national correspondents to return capture statistics in the 2000 inquiry. The major distinction is between data sent as e-mail attachments and those returned in paper formats via fax or mail. Under *e-national-format* are recorded those questionnaires received via e-mail in a format either tailored by the country or following international standard (e.g. EUROSTAT). Similar definitions can be applied to the *Paper formats*. The total number of countries is greater than the number of countries that have returned capture statistics because there are cases in which there is more than one correspondent for a country (e.g. one for inland water catches and one for marine catches) and they may have used different media to return the data or the same national correspondent may have returned the data in two different formats (e.g. STATLANT and NS1).

Media used to return capture statistics

Medium	**2000** **No. countries**	**2000** **%**
e-formats	***105***	
e-NS1	40	38.1
e-STATLANT	4	3.8
e-national-format	61	58.1
Paper formats	***119***	
Paper NS1	60	50.4
Paper STATLANT	36	30.3
Paper national format	23	19.3

In the 2000 inquiry, only the NS1 and STATLANT 21A and 27A electronic questionnaires were available at the FAO ftp site, but for the 2001 inquiry all the remaining questionnaires of the FIDI fishery statistics inquiries (i.e. AQ, IW, FC1, DNC, FTR, FF, FM) and the STATLANTs 34A and 37A have been prepared in electronic format and made available at a dedicated ftp site (ftp://ftp.fao.org/fi/STAT/e-questionnaires/) and the national correspondents informed accordingly. While for the 2000 inquiry the paper questionnaires were still slightly the predominant media used to return catch statistics (see table), in the 2001 inquiry the number of returns via e-mail is still increasing and it will probably exceed the returns by fax or mail.

Training and statistical development

FIDI participated in a Regional Workshop to improve coastal fishery statistics for the Small Pacific Island States (Nouméa, New Caledonia, 16-18 July 2001) which was organized by the FAO Sub-Regional Office for the Pacific Islands under a Japanese Trust Fund Project and hosted

by SPC. The Workshop concluded that future efforts will have to concentrate in the areas where data collection is weak such as small-scale fisheries. In this field, there is a need to promote the use of well-defined, cost-effective and sustainable sampling methods and techniques for collecting basic fishery data.

FIDI conducted a Regional Workshop on Improvement of Fishery Statistics in Asia and Pacific Countries in Bangkok, 6-10 August 2001, funded by a Japanese regional project. Participants discussed the state of fishery statistics with special focus on constraints in developing sustainable national statistical systems. ARTFISH was also introduced during this workshop.

FIDI contributed to the jointly organized FAO-SEAFDEC Workshop "Regional Training on the Use of Statistics and Other Information for Stock Assessment", Bangkok, Thailand, 9-12 September 2002, which was attended by representatives of 13 countries from South and Southeast Asia. Trend analyses of FAO capture statistics by ISSCAAP groups presented at the Workshop evidenced that data reported by some major Asian countries are too uniform to represent the high variability of fishery catches over long periods, and, in other cases, there are remarkable differences between official catch figures and data collected by research institutes.

FIDI helped organize the FAO/MRC/Government of Thailand/Government of the Netherlands *Ad-hoc* Expert Consultation on New Approaches for the Improvement of Inland Capture Fishery Statistics in the Mekong Basin, 2 -5 September, 2002. The Expert Consultation was attended by over 50 participants from Cambodia, China, Laos, Thailand, Vietnam, AIT, IUCN, SEAFDEC, invited experts and resources persons from MRC and FAO. The consultation started from the agreed premise that inland fisheries were extremely important in the Mekong region, but that poor information on the status of the fisheries and the role they play in the economy of the region were preventing proper valuation of the sector. Strong evidence was presented that small-scale and subsistence inland fishery catches and numbers of fishers in Southeast Asia are several times greater than officially reported. The consultation stated that, as priorities, accurate information was needed:

- to obtain status and trend information on the fisheries and the environment for the formulation and assessment of management interventions concerning the fishery
- to valuate the fisheries appropriately
- to fulfil international obligations and
- to justify the requests for appropriate allocation of funding/resources to the sector.

FAO's Inland Water Resources and Aquaculture Service (FIRI), in collaboration with the Fisheries Information, Data and Statistics Unit (FIDI) organized the Expert Consultation on Land and Water Use in Aquaculture (Rome, Italy, 7-10 October 2002), with a view to generate primary baseline information and expert advice on trends, patterns, opportunities and challenges of land and water use in the various forms of aquaculture farming systems and practices.

FIDI participated in the 19th Session of the Asia and Pacific Commission on Agriculture Statistics (APCAS) in Seoul, from 21 to 25 October 2002 and presented a paper on shortcomings in fishery statistics in the region and on the proposed Strategy for Improving Information on Status and Trends of Capture Fisheries (both ROs). APCAS expressed support for the Strategy. Several countries indicated plans to incorporate fisheries or aquaculture questions in their next Census of Agriculture or to undertake a separate fishery census. It was decided that inclusion of aquaculture into the main programme of the World Census of Agriculture of 2010 would be discussed further at the future APCAS sessions.

FIDI prepared a paper on the regional programme for fishery statistical development for Africa for the African Commission for Agricultural Statistics (AFCAS) in Pretoria 27-29 November 2002.

During 2000-2001 FIDI developed a number of technical documents and computer software geared towards design and implementation of national fishery statistical programmes. These include:

- A training and planning handbook on sample-based fishery surveys (FAO Fishery Technical Paper No. 425).
- A theoretical paper on sampling in large and infinite populations with title: Safety in sampling (in final preparation stage).
- Operations manuals for the consolidated Artfish package for the storage and analysis of basic fishery data resulting from sample-based fishery surveys (Artbasic, Artser modules of the Artfish 2000 for Windows, suite of statistical approaches and software).
- Planning for and initial development of linkages between Artfish and WinTuna was undertaken.

FIDI was directly involved in project identification, formulation, implementation, backstopping and follow-up in the following countries: Ghana, Benin, Togo, Cameroon, Gabon, Angola, Madagascar, Congo DR, Congo RP and Burundi. FIDI also contributed to a regional workshop in Djibouti organized by the PERSGA project.

Other issues

Collaboration with CWP agencies continued with intensified data exchange with tuna agencies and CCAMLR. Consultations with CWP members have been held via e-mail on statistical-related issues such as modification of FAO official names for tuna species and for a common definition among FAO, ICCAT and GFCM of the "tuna farming" practice.

A project is underway to develop a new version of the FISHSTAT software that is expected to be released in 2003.

FIDI staff contributed actively to the preparation of FAO's State of World Fisheries and Aquaculture 2002 (SOFIA 2002) which will be available in early 2003. Part 1 of SOFIA 2002, which is the World Review of Fisheries and Aquaculture, relies very heavily on FAO's fishery statistics, and preparation of this Part was conducted by FIDI.

Work on the re-assignment of FAO capture statistics by Large Marine Ecosystems was finalized and results analyzed clustering LMEs; a study on trends in oceanic captures (either epipelagic or deep waters) funded by the World Resources Institutes was also completed. A FAO Technical Paper including these two complementary studies is in press.

A consultant was hired to undertake medium and long term fish supply and demand projections for all countries, taking FIDI's food balance sheets as a reference base. It is expected that this study will be finalized and published during 2003.

A study commissioned by FIDI which utilized some FAO capture fishery production statistics was published as FAO Fisheries Technical Paper No. 410 titled "Climate change and long-term fluctuations of commercial catches: The possibility of forecasting".

A chapter titled "Gathering data for resource monitoring and fisheries management" authored by Richard Grainger (Chief, FIDI) and David Evans (consultant) was published in the Handbook of Fish Biology and Fisheries by Blackwell Publishing in 2002.

The FAO Evaluation Service undertook a review of the statistics programmes for agriculture, fisheries and forestry utilizing several consultants and an external Review Panel. The report will be presented to the FAO Programme Committee in 2003.

FIDI staffing changes

In October 2000 Ms Stefania Vannuccini was appointed as Fishery Statistician (Commodities).

In March 2001 Ms Gabriella Laurenti was appointed as Statistical Clerk with responsibility for food balance sheets and fish consumption statistics.

In April 2002, Mr Fabio Perfetto was appointed as Statistical Clerk.

The system developer and author of FISHSTAT+, Mr Yuri Shatz, resigned from FAO in June 2002 and his successor is under recruitment.

In August 2002 Mr Raymond Sfeir, who had been working with FIDI in a temporary capacity, was appointed as Data Clerk.

Mr Roberto Bentivoglio, Statistical Assistant, retired in October 2002. A new professional post of Fishery Statistician with responsibility for fishing fleet statistics has been created and is under recruitment.

Mr Marc Taconet, who had been the FIGIS development project manager, was appointed to the FIDI post of Fishery Information Officer (FIGIS) under the regular programme.

Dr Alan Lowther of the US NMFS has been appointed Fishery Statistician (Aquaculture) and is expected to take up duty in FIDI in late February 2003.

Agenda item 7: Elasmobranch Statistics

Recent initiatives taken by FAO and CWP members, such as the inclusion of addenda to STATLANT questionnaires and collection of shark statistics by tuna regional commissions, and the growing awareness on the needs of better elasmobranch data raised by the International Plan of Action on sharks, have yielded more detailed statistics in the two latest capture production inquiries (2000 and 2001). A greater number of countries have been reporting elasmobranch capture statistics with a good breakdown by species, some of which only reported aggregated data in the past. The table below shows the breakdown of elasmobranch statistics included in the FAO capture database for the last available five years; it should be noted that 16 new elasmobranch species items and 52 new series have been reported in the 2000 inquiry as compared to 1999. The increased breakdown in 2000 is due to a real improvement in reporting and not to disaggregation of data and availability of other sources as was mainly the case for the previous years. Improved reporting also continued with the 2001 data, which have not yet been completed, however.

Breakdowns of FAO capture statistics for ISSCAAP group 38 (Sharks, rays, chimaeras)

	1996	**1997**	**1998**	**1999**	**2000**
Species items	37	46	55	59	75
Countries	108	107	107	113	114
Fishing areas	17	17	18	18	18
Total number of series	341	361	398	425	477
Percentage of catches at the genus/species level	18.3%	18.6%	19.7%	19.8%	23.1%

Note: only items with at least 1 mt have been considered; data for years prior to 2000 do not include subsequent revisions

In the framework of the IPOA-sharks, national projects have been carried out in some countries. Regarding activities related to fishery statistics, the FAO Species Identification and Data Programme released in February 2002 Volume II of the revised and expanded version of the catalogue "Sharks of the World". The author, L.J.V. Compagno, is presently working on the preparation of the other two volumes and the manuscript of Volume I is expected by mid-2003, while Volume III should be ready towards the end of 2003 or early 2004. As a whole, the new catalogue will contain 480 species, about 140 more than the previous version of the catalogue published in 1984. Volume II is also available on the Internet at ftp://ftp.fao.org/fi/document/sidp/x9293E_SharksVol2/X9293E00.pdf . In the first half of 2003, the "Field Guide of Elasmobranches of the Red Sea and the Gulf of Aden" and the "Field Guide of Elasmobranches of the Mediterranean and Black Sea" are also expected to be released. The preparatory work for a "Catalogue of batoids of the world" has started following a meeting with leading taxonomists held in March 2002 in Paris. This catalogue will include over 600 species and comprise five volumes, releases of which are expected between 2004 and 2009.

Agenda item 8: National data collection methodologies and data quality criteria and indicators

FAO has over the years acquired numerous descriptions of national fishery data collection methodologies through national and regional statistical workshops and through national and regional field projects. However, there has been no systematic or comprehensive assembly of such methodological information.

FAO has undertaken an initiative for agricultural statistics called the Agricultural Bulletin Board on Data Collection, Dissemination and Quality of Statistics project (ABCDQ). This was established in 2000 to guide users that might seek information, on the sources and methods of national agricultural data collection and dissemination and on their quality. Quality is defined by the project as Relevance, Accuracy, Timeliness and Punctuality, Accessibility and Clarity, Comparability, Coherence and Completeness, and sound Meta Information.

Metadata in the FAO context here covers data describing different quality aspects of statistical data, e.g.,

1- Contents aspects, describing concepts, definitions and classifications of variables (an example of this is the notes next to items in FAOSTAT.

2- Accuracy and reliability aspects analysing different kinds of errors associated with the estimates.

3- Availability aspects describing which statistical data are available, where located, how they can be accessed, etc.

4- Methods of data collection, describing how data were collected.

The ABCDQ is currently under development and the current version is being provided to stimulate country input as well as gathering national meta data contributions in an organized and systematic way. It is hoped that by the positive response to this initiative the data quality of FAOSTAT, the database of The Statistics Division, will be enhanced in a significant way.

The ABCDQ information can be accessed at http://faostat.fao.org/abcdq/ where descriptions of national statistical methodologies are provided together with a subjective overall national scoring (good, average, bad) and "barometers" for individual statistical sets showing the proportion of data cells which are based on reported statistics (as opposed to estimated data).

A new FAO corporate statistical working and dissemination system called FAOSTAT2 will be developed and it will contain information on data quality, although the details have not yet been worked out. FIDI will participate in the design and development of FAOSTAT2 and fishery statistics will be included in the system.

As mentioned in document CWP-20/4 on follow-up to recommendations from CWP-9, FIGIS developed and tested across nine global statistical data sets a template designed to host and disseminate on the web the description of statistical collections including the methodologies used and data quality criteria. This prototype should be fully integrated as a FIGIS module during 2003. It is important to underline that the template design makes provision both for describing collections with textual and standard fields, and for granting the user with a facilitated and progressive understanding of the statistical data under investigation. Metadata associated with the template proved to be generic enough to fit adequately the needs of aggregated data sets as diverse as global capture fishery production and supply utilisation accounts. Obviously, striving to document FAO/FI statistical data collections with a single template from the currently available information revealed many gaps, and FIDI will have to document more systematically its

processing methodologies during the coming months. The prototype product was presented to the "Statistical Methodologies and data management" working group advising on the upgrade of the FAO corporate statistical system (FAOSTAT2 project), and the product will be assessed further as part of the FAOSTAT2 project implementation. Further progress will consist of reviewing the proposed template at CWP agency level, agreeing on Metadata element definitions, and in consolidating lists of terms invoked by these Metadata elements (for example, a standard list of quality assurance items would be "complete coverage", "consistency", "accuracy", "accessibility", "documentation", ...). One area which obviously requires more work (as mentioned by the FAOSTAT working group) is the method for the calculation of an accuracy indicator.

Agenda item 10: Catch and Trade Certification Schemes

The use of catch certification and trade documentation for the control of imports of fish products in order to quantify and subsequently to control the imports of fish products has rapidly developed in the last few years. The rapid introduction of the schemes led to fears that there would be a proliferation of different forms to be completed and this would cause confusion amongst fishermen and customs officials. This issue has been discussed in many venues over the last few years and in particular it was addressed by the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). The IPOA-IUU was adopted by consensus at the 24th Session of COFI on 2 March 2001 and endorsed by the 120th Session of the FAO Council on 23 June 2001.

In response to the paragraph 91 of the IPOA-IUU, the FAO Secretariat has collaborated with the Chairperson of the Meeting of Regional Fishery Bodies, to convene an Expert Consultation of Regional Fishery Management Bodies on the Harmonization of Catch Certification. The Expert Consultation was hosted by IATTC in La Jolla, California, from 9 to 11 January 2002. The meeting was attended by experts nominated by the regional fishery management organizations (RFMOs), experts in catch certification and trade, and those directly involved in catch certification. There were also a limited number of experts nominated by FAO. The report of this Expert Consultation has been published as FAO Fisheries Report. No. 697. "Report of the Expert Consultation of Regional Fisheries Management Bodies on Harmonization of Catch Certification. La Jolla, United States of America, 9-11 January 2002", in 2002.

The expert Consultation reviewed the current status of catch certification and catch documentation, the types of documentation programmes already adopted by RFMOs and the impact of catch certification and catch documentation in the areas in which they have been introduced.

The Consultation noted that terms for catch and landings of fish are often used in different ways which can lead to confusion. The Coordinating Working Party on Fishery Statistics (CWP) has adopted a standard terminology to eliminate this confusion and has recommended that FAO use it. The Consultation recommended this should be followed by all parties. In this sense all uses of "catch" for this subject should be replaced by "landings". In the report this has not been done to avoid conflict with the name of the Consultation and its antecedents but the Consultation recommended that FAO and RFMOs using these schemes should adopt the standard CWP terminology.

It was considered that multiple formats may create confusion and increase the paperwork burden placed on operators. The Consultation noted that in the future, more of the world's fisheries would be subject to landings certification and that there would be a number of advantages in harmonizing aspects of these as well as existing schemes. Harmonization of the schemes would create incentives towards compliance, would promote international trade in fish products and would reduce the possibility of fraud.

Trade documents should have harmonized formats and overlays so that they would be readily completed in a number of languages and readily identifiable to customs officers.

It was also noted that some shipments of fish might actually be subject to schemes of more than one RFMO and recommended that the bodies should consult to ensure that the forms are the same and to move towards consistent application of their schemes.

The Consultation examined the linkage between logbook requirements, catch reporting and catch certification. Logbook and other systems of data collection describing fishing activity provide the essential information for catch certification. Fishing logbooks contain data such as the positions of the fishing vessel, its catches and activities. The level of detail varies from fishery to fishery and generally the information contained in individual logbooks is regarded as confidential.

The era of electronic documentation has already affected the fishing industry and is most apparent in the implementation of Vessel Monitoring Systems (VMS). The Consultation noted that electronic logbooks could facilitate the preparation of catch certificates. There was general agreement that logbooks could not be harmonized as evidenced by many attempts in the past, but it was agreed that the output from electronic logbooks could be structured so that they could automatically provide the information required for catch certificates and eventually the required information for trade documentation.

The Consultation evaluated possible methods to harmonize catch certification and catch documentation schemes and agreed that the minimum common elements of information in the documents and procedures to be followed in creating them were those in Table 1 (attached at the end of this item).

The Consultation also examined the criteria for the identification of fisheries that would benefit from catch certification and catch documentation schemes and agreed that while in principle the catch certificate and trade document schemes could be helpful for any fishery managed by an RFMO, priority for development of new schemes should be given to fisheries that are or may be subject to significant levels of IUU fishing. Priority should also be given to fisheries that harvest the same species as others covered by catch certificate or trade document schemes to support the existing schemes of another RFMO.

The following items were the recommendations on catch certification and catch documentation that were addressed to the FAO COFI Sub-Committee on Fish trade:

- Tables 1 and 2 (attached below) have to be considered as a list of basic items and procedures to be included in harmonized catch certificate and trade documents.

- FAO should investigate the possibility of uniquely identifying fishing vessels.

- The terms and codes used in catch certification and trade documentation for species, fishing gear etc. should be those adopted by the CWP, and the International Organization for Standardization (ISO) codes should be used for the country codes.

- FAO should design standard forms based on Table 1 and the forms already in use in consultation with the users of the forms and FAO should encourage their use by current and future schemes.

- Efforts should continue to achieve harmonization of tariff commodity codes to adequately describe the species subject to trade documentation. Where they exist such codes should be incorporated into the trade documents where a code is available.

- Consideration should be given to flag States reporting all information contained in catch certificates or trade documents to a central database used by the responsible RFMO.

- Priority for development of new schemes should be given to fisheries that are or may be subject to significant levels of IUU fishing.

- Where redundancy in catch certificate and trade document among schemes occurs, RFMOs should consult with an aim to eliminating duplicative documents and to eliminating opportunities for fraud.

- Further consideration should be given to the feasibility of developing electronic systems for producing information for catch certificates and trade documents.

- Until an electronic format is developed and implemented effort should be made to limit the size of each document to one page size A4.

- Consideration should be given to assisting developing countries in meeting the requirements of any catch certification or trade documentation scheme.

The COFI Sub-Committee on Fish Trade, held in Bremen on 12-16 February 2002, reviewed the Report of this Expert Consultation and many delegations felt that its outcome was a step in the right direction for the harmonization of catch documentation for trade purposes, but there was a need for further work. It was decided that the matter of catch documentation for trade purposes be referred to the 25th Session of COFI on 24-28 February 2003 for further consideration.

Another recent development in the catch and trade certification schemes is a report prepared by Peter Miyake for FAO which reviews further developments in adopting similar schemes by any RFMO and examines efforts in harmonizing the systems. The paper also reviews the forms already in use, compares the forms with the recommendations made by the Expert Consultation, examines the difficulties experienced by various RFMOs and Contracting Parties in implementing the programs and suggests possible harmonized form and instructions. It will soon be published as

FAO Fisheries Circular No. 986: Recent developments in catch certification and trade documentation in Regional Fisheries Management Bodies.

On this subject, another publication which should be noted is the FAO Fisheries Technical Paper N° 422, Product certification and ecolabelling for fisheries sustainability (Wessells, C.R.; Cochrane, K.; Deere, C.; Wallis, P.; Willmann, R., 83p) published in 2001. This document brings together information on the theoretical foundations, institutional aspects, relationship with international instruments including trade law, and current experiences on product certification and ecolabelling applied to fish and fisheries products.

A. TABLE 1

B.

C. BASIC ITEMS TO BE INCLUDED IN THE CATCH CERTIFICATE OR TRADE DOCUMENT FORMS

	Catch Certificate		**Trade Document**	
• Tariff Commodity Code			✔	
• Issuing Authority (Regional Fishery Body or Flag State)		✔		✔
Unique document number (which can be given by authority or by users according to specific system). Can be coded if required (e.g year of issue)		✔		✔
Fishing vessels				
Name		✔		✔
Identification number (registration number, call sign)	✔			
Flag state		✔		✔
Name of captain	✔			
Authority to fish (Yes/No)		✔		✔
Fish (Landed/Transshipped/Exported)				
• Weight of fish by species and product type	✔		✔	
• Area (specific) of capture		✔		✔
• Period of capture (Start Date/End Date)		✔		✔
• Date of Landing		✔		✔
• Gear used		✔		✔

	Catch Certificate	Trade Document
a)		
b) Person who validated the document		
• Name	✔	✔
• Title/Position	✔	✔
• Authorizing Authority	✔	✔
• Address	✔	✔
• Seals and signature	✔	✔
Exporters (or re-exporters)		
• Name	*	✔
• Company	*	✔
• Address	*	✔
• Signature	*	✔
• Weight of fish by species and by product type	*	✔
• Catch certificate number	*	✔
(if different export certification is prepared)		
• Import details if re-exportation	*	✔
(copy of original import document required		
Importers		
• Name	*	✔
• Company	*	✔
• Address	*	✔
• Signature	*	✔
• Weight of fish by species and by product type	*	✔
• Export document and/or catch certificate numbers		*
(if independent document is prepared)		
• Point of Unloading		

II. * If the product enters the international trade this information must be supplied.

III. TABLE 2

IV.

V. SUGGESTED STANDARD PROCEDURES (MINIMUM REQUIREMENTS) TO BE FOLLOWED

The timing for the submission and transmission of documents should be clearly defined

Catch certificate

- The catch certificate should be certified by captains and transmitted to flag State authorities prior to the landing or transhipment.
- The catch certificate should be validated by the authorised officials prior to unloading. This can be done by seals and/or signature or unique number.
- The information on the catch certificate should be verified upon unloading the catch in terms of weight and species
- The original or copy of the catch certificate should be sent to flag state authorities
- The original or copy of documents should be accompanying all the shipments.
- Copies of the catch certificate should be transmitted by the flag State to the data centre (in most of the cases, Secretariat of the relevant fisheries management Commission)

A. TRADE DOCUMENT

- If the information in the trade documents are derived from catch certificate, the catch certificate number must be included.
- The authorities designated by the government of the exporting or re-exporting country must verify the information included and issue validation. This can be done by seals and/or signature.
- The documents must accompany the shipment for importers to check.
- Copies of the trade documents must be transmitted by the exporting and importing countries to the data centre (Secretariat of the relevant fisheries management Commission).
- Documents must be verified by the authority of importing states.
- Importing state authorities should transmit summary report of the trade documents received to the Secretariat of the relevant fisheries.

Agenda item 11: Catch terminology

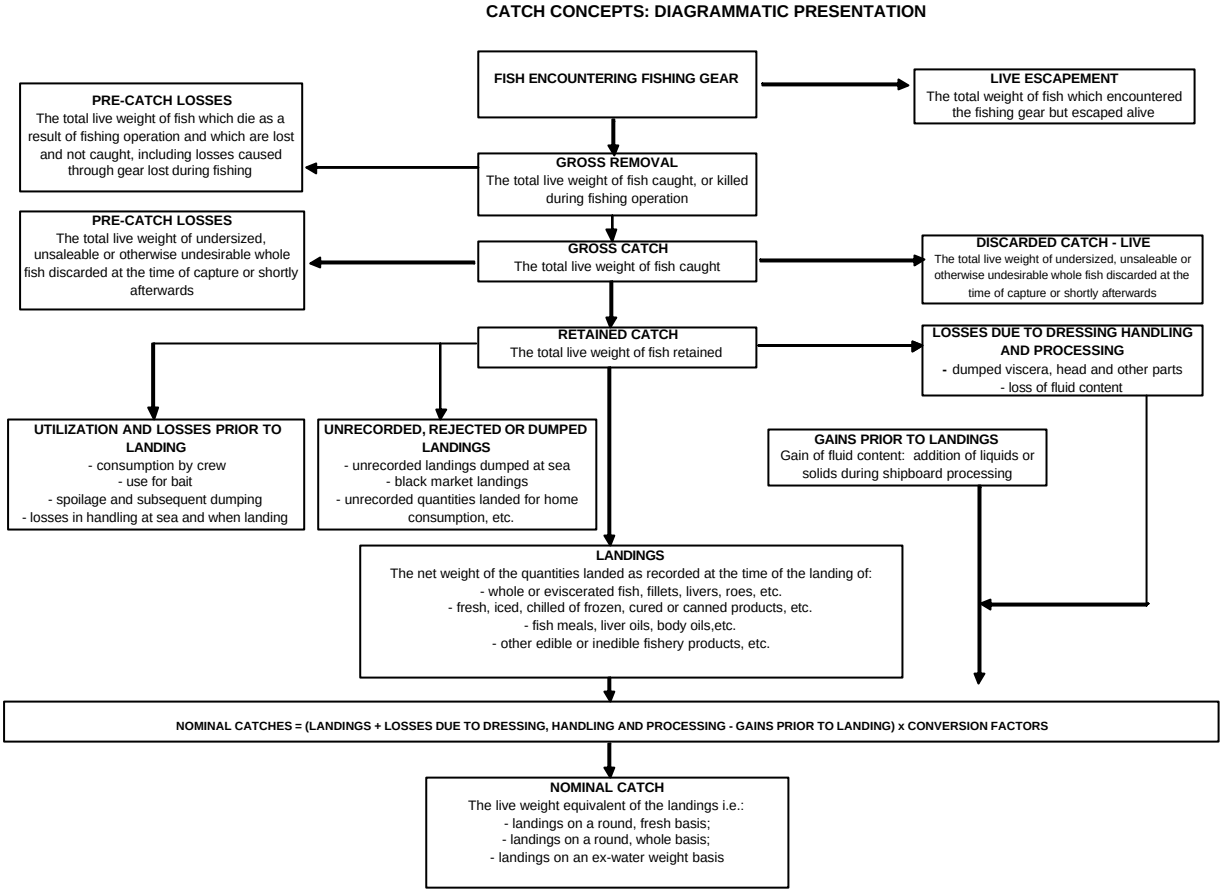
The CWP Handbook of Fishery Statistical Standards currently contains the following definitions which are taken unchanged from the former Handbook of Fishery Statistics:

Nominal Catches: The concept "NOMINAL CATCHES" refers to the landings converted to a live weight basis. In fact it is often referred to as the "Live weight equivalent of the landings" or shortened to the "Live weight". In national publications the same concept is also given the name "Landings on a round, fresh basis", "Landings on a round, whole basis" or "Landings on an ex-water basis".

Landed Weight: The concept "LANDED WEIGHT" refers to the mass (or weight) of a product at the time of landing, regardless of the state in which is landed. That is, the fish may be whole, or gutted or filleted. Consequently this unit is of limited use for further analysis except where it is known that the product is very homogenous in nature. Where more detailed analysis of the data is required the landed weight is generally converted to a more meaningful measure, the most frequently used being the "Nominal catch".

Product Weight: The concept "PRODUCT WEIGHT" suffers from similar disadvantages being simply the weight of a product at the time of weighing. Thus it does not describe the presentation of the product and, unless it is known that the product is homogenous in form, further analysis has to proceed with caution.

The Handbook makes use of the flow chart below to explain the concepts:



The Handbook does not define "Catch" per se. However, CWP-17 generally agreed with the following definitions:

Catch: The quantity of fish taken by the fishing gear which reaches the deck of the vessel.

Discards: That portion of the Catch which is thrown away.

Landed or Retained Catch: That portion of the Catch which is not discarded.

The "Guidelines for the routine collection of capture fishery data" (FAO Fishery Technical Paper No. 382) gives the following definitions:

Catch: 1) Any activity that results in killing any fish or bringing any live fish on board a vessel. 2) The component of fish encountering fishing gear which is retained by the gear.

Discard: 1) To release or return fish to the sea, whether or not such fish are brought fully on board a fishing vessel. 2) Part of the catch, which is not retained and is returned to the sea. Discard typically consists of "non-target"species or undersized specimens. While some species (clams, sea stars, etc.) might survive the process, most fish will die.

Landings: Weight of catch landed at a wharf or beach.

Other definitions include the following:

Catch: The total number (or weight) of fish caught by fishing operations. Catch should include all fish killed by the act of fishing, not just those landed. (from Restrepo V. (1999): Annotated Glossary of Terms in Executive Summary Reports of the International Commission for the Conservation of Atlantic Tunas´ Standing Committee on Research and Statistics (SCRS). ICCAT)

Other Definitions

Catch: The component of fish encountering fishing gear which is retained by the gear. (From US Dept. of Commerce (1996): http://caldera.sero.nmfs.gov/fishery/regs/inter600.htm#B).

Landings: Weight of what is landed at a landing site. May be different from the catch (which includes the discards). (From FAO Fisheries Glossary.)

CWP may wish to agree definitions of Catch, Discards and Landings which could be included in the Handbook.

Agenda item 12: Vessel identifiers

For the purpose of populating the High Seas Vessel Authorization Record (HSVAR) application with a few thousand vessel records supplied by 17 countries which are parties to the Compliance Agreement, FAO communicated with the data owners and with international organisations on the question of the vessel identifiers and their management, in order to propose a solution for an efficient exchange of vessel records between FAO and the Regional Fishery Bodies. The findings compiled in the proposals to improve vessel identification and information exchange flows in the HSVAR context ("Proposals for standardisation"; see Annex 1) show that unfortunately, none of the existing vessel identifiers matches the need for a unique identifier for the HSVAR data base, and therefore a new identifier needs to be established for that purpose. Furthermore, the question of vessel identifiers cannot be considered separately from the data exchange formats, and the workflow procedures that should be agreed upon among parties. Two additional documents focussing on a topic tree for the structuring and exchange of high seas fishing vessel records and proposed workflow scenarios for regular exchange of vessel records are proposed for review. Below are some of the salient points: 1) in an attempt to strengthen the HSVAR Identifier (and its Non_HSVAR_Id complement), the agencies involved in the exchange of vessel records are invited to manage in parallel the IMO number (derived from the Lloyds identifier), as the IMO number is available for about 60% of the vessels included in the HSVAR database; 2) the workflow strategy allows for two-way exchange of vessel records between FAO and RFBs, with efforts on both sides to identify unique instances of Vessels; 3) some basic principles should be agreed for the management rules applied to the master Vessel record, and consequently on the observations made by different agencies on a single vessel.

FAO's proposal is to upgrade its vessels records application to better serve the needs for HSVAR, while at the same time being configurable to fit the needs of other Regional Vessels Monitoring System. This upgrade

would also respond to the requirements for a global Directory of Vessels Fishing on the High Seas, the objective of which would be the evaluation and monitoring of this fleet sector. A precondition to this would be that statements of interest be expressed by the regional partners, and that solid requirements be established. Hence, FAO recommends that 1) the proposed documents be reviewed and discussed, 2) a test exchange of data be undertaken among few voluntary agencies in order to strengthen the proposals, 3) requirements for the management of Regional Vessels Monitoring Systems be elaborated, if any local configuration of FAO's Vessel records' application is envisaged, 4) a specific meeting be convened with parties to the Compliance Agreement and Regional Fishery Bodies, to discuss and decide these aspects.

Agenda item 15: Proposed FAO Strategy for Improving Information on Status and Trends of Capture Fisheries

Introduction

The Twenty-fourth session of the Committee on Fisheries (COFI) considered a proposal for improving reporting on the status and trends of fisheries. The Committee unanimously recognized that information on the status and trends of fisheries is fundamental to the mandate of FAO .

The Committee also recognized shortcomings in reporting of information on status and trends of fisheries and, in particular, highlighted problems of data quality. While noting that collection of fisheries data is a national responsibility, the Committee made specific mention of the need to pay more attention to multi-species and small-scale fisheries, which are prevalent in tropical developing countries.

The need for all States to have an opportunity to shape future initiatives to improve information on the status and trends of fisheries was emphasized by the Committee. To this effect, the Committee recommended that a technical consultation be called by FAO to consider how fishery status and trends reporting could be improved effectively, including the possible development of an International Plan of Action. It stated that particular attention should be given to the needs of developing countries for capacity building. The Committee agreed that the proposals elaborated by the Technical Consultation should be presented to the Committee at its Twenty-fifth Session .

Organization and Output of the Technical Consultation

The Technical Consultation on Improving Information on the Status and Trends of Capture Fisheries was held at FAO Headquarters in Rome, Italy, from 25 to 28 March 2002 . It was attended by 60 Members of FAO and by observers.

The Technical Consultation agreed that its discussion on the subject would not include aquaculture because aquaculture has distinctive requirements that need to be addressed specifically for this increasingly important sector. A further consideration was that standards and procedures for data collection and exchange were further developed for capture fisheries than for aquaculture and so it was pragmatic to start with what was already in place, and build on it .

The Technical Consultation expressed the view that the issue of improving information on the status and trends of capture fisheries should have a high priority with regard to implementation of the Code of Conduct for Responsible Fisheries.

The Consultation felt that improving information on the status and trends of fisheries is a broad topic that applies to a wide range of issues, and for a longer term, and that it was necessary to have an instrument that took into account the provisions of other instruments, including the Code of Conduct for Responsible Fisheries. In this regard, it agreed that a Strategy was a more appropriate instrument than an International Plan of Action, as originally proposed, because a Strategy sets forth objectives, policies, programmes, actions and decisions that define who will do what and why. Briefly, the Strategy could be seen as the course of action to achieve defined objectives. It is both partly planned and partly reactive to changing circumstances. The Consultation expressed the view that a Strategy could be used as a foundation for IPOAs and other policy instruments and that it clearly establishes an ongoing commitment at national, regional and global levels.

The Technical Consultation agreed on a Draft Strategy for Improving Information on Status and Trends of Capture Fisheries given in Annex 1, and requested that, in conformity with the instructions of COFI, the Draft Strategy be presented to the Twenty-fifth Session of the Committee on Fisheries for consideration and, as appropriate, for adoption.

The Consultation also recognized that it would be necessary for FAO and FAO Members to elaborate programmes to implement the Strategy and suggested that COFI identify approaches to ensure the effective implementation of this Strategy. In this regard, Annex 2 attached to the present document provides an outline of a project proposal under the FishCode Programme for implementation of the Strategy and for which donor support will be sought.

Main Components of the Draft Strategy

The Draft Strategy is a key to sound policy making and responsible fisheries management (paragraphs 1 to 5) ; it has been elaborated within the framework of the Code of Conduct for Responsible Fisheries (paragraphs 6 to 8); it is global in scope and is designed to cover all capture fisheries in inland and marine waters, including all industrial, commercial, subsistence and recreational fisheries, but does not apply to aquaculture (paragraphs 9 to 11); and the Draft Strategy is founded on sound principles (paragraphs 16-22).

The overall objective of the Strategy is to provide a framework for the improvement of knowledge and understanding of fishery status and trends as a basis for fisheries policy-making and management for the conservation and sustainable use of fishery resources within ecosystems (paragraphs 12 to 15).

The Draft Strategy also specifies actions required in the following nine areas :

- Need for capacity-building in developing countries (paragraph 23);
- Data collection systems in small-scale fisheries and multispecies fisheries (paragraphs 24 to 28);
- Expanding the scope of information on status and trends of fisheries (paragraphs 29 to 31);
- Global inventory of fish stocks and fisheries (paragraphs 32 to 34);
- FIGIS participation, structuring and capacity-building (paragraphs 35 to 38);

- Development of criteria and methods for ensuring information quality and security (paragraphs 39 and 40);
- Development of arrangements for the provision and exchange of information (paragraph 41);
- The role of working groups in assessing the status and trends of fisheries (paragraphs 42 to 44);
- Sustaining data collection, information on the status and trend of fisheries (paragraph 45).

Summary of Draft Project Document: Improving Collection and Processing of Data and Information on the Status and Trends of Capture Fisheries

Data and information for many capture fisheries are of such poor quality that it is difficult to draw reliable conclusions from them. Therefore, it is necessary to improve statistical and other data collection and status and trends reporting systems throughout the world in order to empower fishery policy makers and managers in each country.

The overall objective of the Draft Strategy is to provide a framework for such improvement to facilitate fisheries policy making and management for the conservation and sustainable use of fishery resources within ecosystems. The draft Project Document is based on the required actions of the Draft Strategy, and its outputs are contributions to solve the problems.

The Project addresses the improvement of collection, processing and use of data and information on the status and trends of capture fisheries. It is part of the FishCode Programme "Assistance to Developing Countries for the Implementation of the Code of Conduct for Responsible Fisheries". The project duration is five years, for which a total Trust Fund budget of about US$5,700,000 is required

The immediate objectives of the Project are as follows.

- Objective 1: Improved collection and processing of data and information on capture fisheries (marine and inland) to provide a reliable basis for fish stock assessment, economic analyses and management.
- Objective 2: Fishery data collection and processing according to the latest global standards executed by competent staff.

Project activities will be delivered through the implementation of two overlapping components.

<u>Component 1: Development of Inventories, Methodologies and Operational Guidelines</u>

This component (about 3 years, US$ 1 million) covers the creation of methodological descriptions of fishery statistical and data collection systems used by all countries and regional fisheries bodies. The exercise is intended to obtain a complete picture of all systems in use and all stocks or management units monitored, so as to identify gaps in monitoring and, crucially, to assess the quality of the systems used. It will also identify the improvements and training required in developing countries that are to be addressed under Component 2.

Component 1 activities will be normative and global in nature, involving desk studies, questionnaires and expert consultations as well as data collection and verification missions by consultants over a three period. It is foreseen that FAO Regular Programme staff will be deeply involved in overseeing these activities, which should lead to a number of publications, computer programs and training materials.

Component 2: Field Training and Implementation

Component 2 (about 4 years, US$ 4.7 million) aims at substantial improvement in collection and processing of fisheries statistics and other data and information on capture fisheries for selected developing countries. The main purpose is to obtain better data for policy-making and fisheries management at national level, and at regional level in the cases of stocks shared with neighbouring countries. Improvements in reporting to FAO and other agencies would be an important secondary benefit.

Component 2 covers capacity building at all levels, and implementation of improved or new statistical and other data collection and processing systems in a number of selected countries. There is also a need for improved interaction between fishery statisticians, fisheries analysts, socio-economists and fish stock assessment experts. The Project should facilitate this interaction.

Beneficiary States will be selected from developing countries with substantial capture fisheries, either inland or marine, that have a potential of becoming an example for other countries in similar situations. Training will initially be based on existing material (guidelines, manuals, computer programs), but gradually this lecture material may be modified, building on knowledge gained through the execution of Component 1. The basic approach will be first to train regional teams of trainers by language group, and then to provide Project support at national and/or sub-regional level for courses to larger numbers of national staff.

Institutional Arrangements

FAO will work primarily with national administrations in implementing the Project, in particular the departments and institutes responsible for fisheries statistics and information and for the maintenance of registries important for fishery policy making and management. Where appropriate, FAO will seek partnerships with regional organizations as a means of facilitating prompt and efficient implementation of the Project, particularly in situations where more States are involved.

Considering the magnitude of the problem, the Project should be seen as a driving force that may pass its programme on to other organizations and projects for execution of training and other activities. In particular, it is intended to propose a parallel project under FishCode for fisheries management training. Close coordination is also envisaged with other elements of the FishCode Programme and additional fisheries projects executed by FAO or other agencies.

Agenda item 18: Handbook of Fishery Statistics

The previous version of the Handbook of Fishery Statistics, published in 1990, was conceived and developed to indicate the principles, concepts, definitions and related matters applied to fishery statistics of the Atlantic Ocean and adjacent waters by the CWP Member Agencies. Almost a decade after the publication of the first edition, following discussions and recommendations of several CWP Sessions, FAO has undertaken a thorough revision of the previous Handbook, with the addition of several new chapters to cover a more complete range of fishery concepts and descriptions. The Handbook has now been extended to cover the Indian and Pacific Oceans, the Antarctic and all adjacent waters. Also this edition of the Handbook was developed to indicate the principles applied by the international agencies and there has been no attempt to include details of national systems, many of which, having been developed for specific national purposes, differ from those used

internationally. The title has been changed to "Handbook of Fishery Statistical Standards". One of the main innovations represented by this edition is the electronic dissemination of the Handbook in internet, in addition to the hard-copy. The work of revision has been accomplished only for the English edition of the Handbook.

The new chapters are as follows:

- J. Aquaculture
- L. Fishery Fleet
- M. Fishing Gear Classification
- N. Fishing Effort
- O. Logbooks
- P. Supply Balance Sheets on Consumption of Fish and Fishery Products
- Q. Methodology
- R. Fishery Commodities Classification
- S. STATLANT, STATPAC and FISHSTAT System of Questionnaires
- U. List of FAO Yearbooks of Fishery Statistics

Agenda item 19: Any other business – CWP web site

The CWP web-site owning the domain cwpnet.org was set-up with a home page currently designed as a portal leading to various sub-sites directly related to CWP activities. Major menu items are About CWP (being also the home page with a brief presentation of CWP mandate and objectives, and a link to the CWP page in the FAO/RFB sub-site), News (with link currently provided to the Newsletter prepared by Eurostat), Activities (with links to the CWP meetings page), References (with links to selected documents from the FAO virtual library), and a Fishery Statistical Standards page (with links to FIGIS pages including the handbook of Fishery statistical standards, the Fishing areas section, and the FIGIS reference table management system). With the progressive integration of the above mentioned information domains in FIGIS, making possible the reuse of the same information sources in multiple sites and presentations, the CWP site will be progressively transformed from its current portal status to a fully self-standing site.

ANNEX 1

High Seas Vessel Authorisation Record (HSVAR)
Proposals for standardization

INTRODUCTION

The "Agreement to Promote Compliance with the International Conservation and Management Measures by Fishing Vessels on the High Seas" establishes minimum requirements to be applied by flag states to register and authorize fishing vessels to fish on the high seas, and requires that no Party shall allow fishing vessels flying its flag to fish on the high seas without its authorization. One of its objectives is to prevent vessels from undermining the effectiveness of international conservation and management measures through reflagging, requiring that no Party shall authorize a vessel to fish on the high seas if that vessel previously undermined international conservation and management measures while registered in another state.

The Compliance Agreement also provides for the exchange of information on fishing vessels authorized to fish on the high seas and stipulates that FAO should be a repository of this information which would be shared amongst the parties to the Agreement. This includes information on infringements of management measures by individual vessels and also agreements and exemptions made by contracting Parties. The High Seas Vessel Authorization Record (HSVAR) database was developed for this purpose.

One of the essential points highlighted during the 19th session of the Coordinating Working Party on Fishery Statistics (CWP) was the need to agree on a standard vessel identification system in order to facilitate such flow of information. The following document focuses on proposals to improve vessel identification and information exchange flows in the HSVAR context.

VI. I. Vessel identification

A. 1. COMPLIANCE AGREEMENT

Paragraph 6 of Article III of the Compliance Agreement deals with the requirement for each vessel entered in the record of fishing vessels authorised to fish on the high seas, to be readily identified in accordance with generally accepted standards, such as the FAO Standard Specification for the Marking and Identification of Fishing Vessels. (Maritime Safety Committee Circulars MSC/Cir.572 8 July 1991. IMO library).

The Standard Specifications are based on:

- the International Telecommunication Union's system for the allocation of call signs to countries for ship stations and;
- generally accepted design standards for lettering and numbering.

According to these standards.

Vessels shall be marked with their International Telecommunication Union Radio Call Sign (IRCS)[1]. Vessels to which an IRCS has not been assigned shall be marked with the characters allocated by the International Telecommunication Union (ITU) to the flag State and followed by, as appropriate, the licence or registration number assigned by the flag State. In such cases, a hyphen shall be placed between the nationality identification characters and the licence or registration number identifying the vessel. These marks should always be visible from another vessel and from the air.

The above are the only specifications contained in the Compliance Agreement document for the purpose of identifying high seas fishing vessels. Comments and recommendations received during the CWP 19th session made it clear that these requirements were not sufficient for computerized information management purposes, as the International Radio Call Sign was not a stable identifier.

B. 2. RECOMMENDATIONS OF CWP 19TH SESSION

The CWP 19th session agreed that for the purpose of inter-agency exchanges of vessel records, a unique vessel identifier should be assigned to each vessel, as current vessel identifiers (such as vessel name, Flag State and registration number in the Flag State, International Radio Call Sign, etc.) are unstable.

CWP recommended that FAO draft a list of unique, essential and desirable vessel identifiers for vessel registers for the consideration of CWP agencies, and that FAO consult with the latter regarding their use in HSVAR and CWP agency vessel registers.

C. 3. PROPOSALS FOR THE UNIQUE IDENTIFICATION OF HIGH SEAS FISHING VESSELS IN HSVAR CONTEXT

HSVAR ID

For the purpose of unique identification of vessels in the HSVAR context FAO will assign a code (HSVAR_ID, see Table 1). This would be permanent and assigned to each vessel entering the HSVAR database as well as a parallel database, created for exchange purposes with the Regional Fishery Bodies (RFBs). This code would be made up of the ID sequential number preceded by the three letters "FAO". To facilitate the assignment of this code to vessels contained in FAO's partners' registers or to any new vessels submitted, additional identifiers will be requested from the countries adhering to the Agreement, and stored jointly. The introduction of this unique code is considered necessary as no other unique identifying code, comprehensive of all high seas fishing vessels, exists.

[1] Call Signs in the International series for *Ship stations* are formed as follows: 1) two characters and two letters, or two characters, two letters and one digit (other than the digits 0 or 1); 2) However, ship stations employing only radiotelephony may use a call sign consisting of: - two characters (provided that the second is a letter) followed by four digits (other than the digits 0 or 1 in cases where they immediately follow a letter), or – two characters and one letter followed by four digits (other than the digits 0 or 1 in cases where they immediately follow a letter). The first two characters shall be two letters or a letter followed by a digit or a digit followed by a letter. The first two characters, or in certain cases the first character of a call sign, constitute the nationality identification.

Additional identifiers requested from the countries adhering to the Agreement

a)

A. IMO[2] Number

Introduction to the IMO ship identification number scheme

The IMO ship identification number scheme was introduced in 1987 through adoption of resolution A.600(15), as a measure to enhance ship safety and security. It aimed at assigning a permanent number to each ship for identification purposes. That number would remain unchanged upon transfer of the ship to other flag(s) and would be inserted in the ship's certificates. Following adoption of the new IMO International Convention for the Safety of Life at Sea (SOLAS) chapter XI (in particular regulation 3 thereof) by the 1994 SOLAS Conference, the implementation of the scheme became mandatory for all ships (passenger ships of 100 gross tonnage and above and all cargo ships of 300 gross tonnage and above) as of 1 January 1996.

As clearly stated above, the IMO scheme is not mandatory for fishing vessels; nevertheless all ships included in the Lloyds Maritime Database (also fishing vessels) are assigned an IMO number.

The IMO number in HSVAR

In the context of HSVAR the introduction of the IMO number is strongly recommended for identification purposes. Countries submitting a list of their vessels authorized to fish on the high seas are encouraged to assign, whereever possible, the IMO number to their records. It would be desirable for the provision of this number, when it exists, to become mandatory in the Agreement.

The IMO number is made up of the Lloyd's Register of Shipping (LR) number (seven digits) preceded by the three letters IMO[3].

In the case in which the party to the Agreement is not in possession of this information FAO will tentatively assign this number matching the HSVAR record against the record in the most updated Lloyds Maritime database.

Limitations in the use of the IMO number scheme

Although the IMO Number would be an optimal candidate as the only permanent vessel identifier, it can be considered as a useful additional identifier only, as not all vessels authorized to fish on the high seas posses an IMO Number. In fact, when the HSVAR database[4] was run against Lloyd's Maritime database (updated March 2002) it was apparent that approximately 60% of HSVAR records[5] could have been automatically assigned the IMO number. The records of the two databases were matched using the following fields: "vessel flag"; "vessel name" and "year of build", the order and the type of fields matched can be varied.

[2] IMO stands for International Maritime Organization

[3] IMO number and Lloyds number are identical

[4] Presently (March 2002) HSVAR database contains approximately 5500 records submitted by: Japan, Norway, EU countries, Canada and USA

[5] Japanese vessels were excluded from this calculation for problems with vessel's name format

The reasons why this identification number scheme does not cover all the high seas fishing vessels are the following:

1. the implementation of the IMO scheme is not mandatory for fishing vessels;
2. the Lloyds database does not have complete coverage of vessels over 100 GRT for many countries; and
3. Fishing vessels included in Lloyd's Maritime database are practically all of 100 gross tonnage or above (in the current version of the database only 14 fishing vessels out of 24.327 (0.6%) have a gross tonnage below 100), while in the current HSVAR database 19% of the vessels have a GT below 100.

b) B National and regional vessel identifiers

If the vessel does not have an IMO/LR Number, then the national registration number together with any additional vessel identifier used at a national or regional level **(Table 1),** such as the EU "Internal Number"[6] or the International Radio Call Sign, could be used to facilitate vessel identification.

Article VI of the Compliance Agreement refers to the exchange of information between the contracting Parties and FAO. Paragraph 1 says that each Party shall make readily available to FAO the following information with respect to each fishing vessel entered in the record:

Name of fishing vessel, registration number, International Radio Call Sign, where and when built, Flag State and physical vessel identifiers, such as: length, beam, draught, gross registered tonnage etc. (not all of them being mandatory). The physical characteristics of a vessel are, in fact, considered stable identifiers as they are unlikely to change during the vessel's life. This information, together with the vessel history, such as previous name and previous flag, the national vessel identifiers specified in **table 1** and the implementation of paragraph 5[7] of the same Article, could be sufficient for the scope of identifying vessels.

Limitations in the use of national and regional vessel identifiers

Use of national or regional identifiers however, would be more laborious and the results would be less precise. To uniquely identify a vessel, in fact, more elements would be needed, together with updated information on the vessel history. The main problem in using such identification elements is that most of them are valid at a National or Regional level and are therefore subject to change if the vessel is sold to another country. This means that, unless the various changes (change of flag, activity, name etc) undergone by a vessel were accurately recorded, it would be impossible to follow it during its lifetime.

In this sense the so called physical vessel identifiers specified above would be more useful, as these should remain stable during the entire life of the vessel. They should, jointly, define a vessel profile that a specific software algorithm would be able to exploit for unique identification purposes.

The different situations encountered while analysing national registration numbers exemplify some of the cases which can occur, therefore highlighting the need to agree on a case by case basis on the utilization of these or other identifiers.

[6] This number should become mandatory in the Agreement

[7] Paragraph 5 says that each party shall promptly inform FAO of any addition to the record of high seas vessels or any deletion from the record, specifying also the reasons

- EU countries use an Internal Number (see Table 1) for identification purposes in addition to the national registration number which is subject to change each time the vessel is sold to another country (within or outside the EU). Such type of number is very useful, and should be strongly recommended to be provided, because it has a fairly wide geographical coverage as it has validity within all the EU countries.
- USA has a registration number (Official Number, O.N.) which never changes while the vessel is registered in the USA. Even if the vessel reflags to another country and then returns to US documentation in the future, the original O.N. is used to redocument the vessel. This number is mandatory in the Agreement.
- In the case of Japan, the registration number is very unstable as it changes whenever the vessel changes province of registration and owner, or only[8] province. In the current situation it seems that Japan uses in the management of their high seas fishing vessels' record, as unique vessel identifier, the International Radio Call Sign (IRCS). The implementation of the HSVAR ID and, for those vessels registered with Lloyds the implementation of the IMO number, would be highly recommended in the management of Japanese vessel records.

VII. II. Information exchange flows

A. 1. COMPLIANCE AGREEMENT

In Article VI of the Compliance Agreement FAO is made responsible for the gathering and dissemination of information. Each Party is required to make readily available to FAO mandatory[9] and additional[10] (to the extent practicable) information with respect to each fishing vessel entered in the record, and each Party shall report promptly to FAO any modifications of the record, specifying the reason. Each Party shall also report promptly to FAO all relevant information regarding activities of fishing vessels flying its flag that undermine the effectiveness of international conservation and management measures.

FAO shall circulate periodically the above information to all Parties and, on request, individually to any Party. FAO shall also, upon individual request and subject to any restrictions imposed by the Party concerned regarding the distribution of information, provide such information to any global, regional or subregional fisheries organization. Under the same article the Parties shall exchange information relating to the implementation of this Agreement, including through FAO and other appropriate global, regional and subregional fisheries organizations.

B. 2. INTRODUCTION OF THE HSVAR UNIQUE ID

The adoption of the HSVAR unique identifier by the countries adhering to the Compliance Agreement and the fisheries organizations would facilitate the flow of information exchange between the Parties and FAO and, upon request, from FAO to the global, regional or subregional fisheries organizations.

a) According to the Compliance Agreement, information should circulate between the Parties to the Agreement and FAO. Each vessel entering the HSVAR database is assigned an HSVAR code and, if lacking and where possible an IMO number. Both codes could then be transmitted to the Party concerned, and from this point onwards remain unaffected by any change a vessel may undergo during its permanence in the HSVAR database. The HSVAR code, together with the IMO number

[8] Source: Mr Hideaki Okada, Japanese Associate Professional Officer working in FAO for FIPP

[9] Mandatory information: (a) name of fishing vessel, registration number, previous names (if known), and port of registry; (b) previous flag (if any); (c) International Radio Call Sign (if any); (d) name and address of owner or owners; (e) where and when built; (f) type of vessel; (g) length.

[10] Additional information: (a) name address of operator (manager) of operators (managers) (if any); (b) type of fishing method or methods; (c) moulded depth; (d) beam; (e) gross register tonnage; (f) power of main engine of engines

when available, would assure a unique identity for each vessel, facilitating the exchange of precise and reliable information.

b) FAO should also, upon request, distribute such information to the global, regional or subregional fisheries organizations. The adoption of the HSVAR code would be essential to standardize flow of information. For example the introduction of this code would facilitate the identification, through the lack of an HSVAR ID, of vessels which, although flying the flag of one of the Parties to the Agreement, were not authorized to fish on the high seas. This could be one of the possible scenarios highlighted through the exchange of information with the RFBs.

c) FAO would also, beyond the requirements of the Agreement, be interested in receiving listings of vessels from the Regional Fishery Bodies which could be included in a parallel database (accessible to whoever the data providers decide), both to verify the HSVAR data, and to attempt to estimate global fishing capacity. The same unique identifier could be utilized for such parallel databases, although it may be much more difficult to maintain because of the uncontrolled nature of the vessels.

Finally, the adoption of a unique vessel identifier would insure more precise and timely circulation of information, in order to permit immediate detection of those vessels engaged in activities which undermine international conservation and management measures.

C. 3. VESSEL HISTORY

Vessel history is generated each time any of the requested features specified in Article VI of the Compliance Agreement undergoes changes which are reflected in the database. Through improved workflows and exchange mechanisms, vessel history would be progressively generated upon each vessel record update.

CONCLUSIONS AND RECOMMENDATIONS

At present the countries which have forwarded to FAO the list of vessels authorized to fish on the high seas are the following: Canada, USA, EU countries, Norway and Japan.

After a careful examination of the way each country managed the identification of its vessels, it became apparent that national vessel identifiers were subject to change if the vessels were sold to another country. Sometimes, as in the case of Japan, the changes are registered each time the vessel changes province of registration. This would make it very difficult to keep track of vessels that changed flag.

The examination of international vessel identifiers indicated that the best candidate for vessel identification was the IMO number. Limitations of this number concern the fact that it does not cover all high seas fishing vessels (60% of HSVAR vessels). At this point the introduction of the new identifier, HSVAR ID, specific to this situation seemed inevitable.

FAO would recommend:

- The introduction in the HSVAR database of additional fields to the ones specified in the Compliance Agreement such as:
  1. The unique HSVAR ID: The adoption of this field by the Parties to the Agreement and by the RFBs would highly facilitate the exchange of information between the Parties, between FAO and the Parties, and also between FAO and the RFBs.
  2. The IMO number: This number is the only international and unique identifying code already available for many HSVAR fishing vessels (60% of the present HSVAR vessels, excluding Japan).

Some Parties already have this number for some authorized vessels (USA, Canada). Alternatively this number could be extracted automatically for some vessels from the Lloyds Maritime Database.

3. The additional vessel identifiers: such as the EU Internal Number valid within the EU countries.

- The creation of a parallel database to exchange information with the RFBs as it was recognized that the RFBs might often be better suited than FAO to identify individual vessels and eliminate duplicate records as they might have access to additional information.
- Beyond the requirements to the Compliance Agreement which stipulate that FAO should be a repository of the information on fishing vessels authorized to fish on the high seas, a more active role of FAO in the exchange of regular information with the Parties to the Agreement and the Regional Fishery Bodies is recommended. It is suggested that this should be achieved through the establishment of a systematic work flow between FAO and the bodies concerned.
- A more active role in the regular exchange of information is also recommended for the complying countries

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منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Organización de las Naciones Unidas para la Agricultura y la Alimentación

VIII. Table 1

LIST OF POSSIBLE ESSENTIAL AND DESIRABLE IDENTIFIERS

NAME	DEFINITION	COUNTRY	COMPLIANCE AGREEMENT
Unique HSVAR Identifier			
1. HSVAR_ID	Unique and permanent, while in HSVAR, vessel identifying code assigned to all vessels upon entry into HSVAR data base and its extension, made of the vessel's ID sequential number preceded by the three letters "FAO"	Applies to all high seas fishing vessels in Compliance Agreement	This vessel identifying code has already been assigned to the over 5500 records entered in the HSVAR database. The code never changes while the vessel is authorised to fish on the high seas. Problems might arise if the vessel were sold to a country not party to the Agreement and were then repurchased by a country which had ratified the Compliance Agreement. It is very likely that during these various passages the code could be lost. In this case it would be necessary to check other positive identifiers. The introduction of this identifier in the contracting Parties' high seas vessels registers and in the regional Fisheries bodies' registers would be essential for the purpose of exchange of information
Additional International Vessel Identifiers			
1. **International Maritime Organization (IMO) Number**. This is equivalent to the Lloyd's Register (LR) Number	Permanent number assigned to each ship for identification purposes. It is made up of the three letters "IMO" in front of the Lloyd's Register of Shipping (LR) number that is assigned to almost all ships upon keel	International	Not mandatory in the Agreement. Could be important for uniquely identifying a vessel as this number is assigned when a ship is built and stays with it throughout its entire life. The registration with Lloyds is voluntary which means that unfortunately not all fishing vessels are assigned this

	laying. Lloyd's Register of Shipping is a classification society based in the United Kingdom		number. In addition this register does not generally include vessels under 100 GRT. The implementation of the IMO scheme has become mandatory as of 1 January 1996 for all passenger ships of 100 gross tonnage and above and all cargo ships of 300 gross tonnage and above. It is not mandatory for fishing vessels. In HSVAR, IMO was supplied only by Canada (6 vessels). USA could supply this number for some permitted high seas vessels. This number could be obtained from Lloyd's Maritime Database. By running HSVAR database against Lloyd's database (updated March 2002) approximately 60% of the present HSVAR records could be assigned the IMO number. The records of the two databases were matched using the following fields: "vessel flag"; "vessel name" and "year of build". The results by countries were the following: USA=41%; Norway=84%; EU=70%; Japan, no attempt has been made yet because of problems with the editing of "vessel name" (in official names, submitted by Japan, the number precedes the name, in Lloyds database the number follows the name)
National Vessel Identifiers (Requested by the Agreement)			
1. Official Number (Registration Number)	Vessels 5 net tons or greater and working in a commercial capacity are required to be "documented" by the U.S. Coast Guard. Documented vessels are issued an "Official Number"	United States of America	Mandatory in the Agreement. It is the national registration number. The O.N. is the number always used in the documentation process regardless of ownership. If a vessel reflags to another country and then returns to U.S. documentation in the

	(O.N.) which is embossed in two places on the vessel.		future, the original O.N. is used to redocument the vessel. In HSVAR all US vessels have this number (879 vessels)
2. Registration Number	Code assigned to a vessel when it enters the Japanese record of fishing vessels	Japan	Mandatory in the Agreement. This number is assigned to each fishing vessel by the Prefecture of the Japanese province in which the vessel is registered. Each time the vessel changes province of registration and ownership or only province this number is modified.
3. Registration Number		Norway	Waiting for an E-mail reply from the Directorate of Fisheries (Norway). E-mail sent on 03/06/02
4. Registration Number		Canada	No info. yet received on the way the registration number is managed
Additional National and Regional Vessel Identifiers			
1. Internal Number	Code assigned to a vessel when it enters the EU fleet file It is made up of the ISO-3 country code followed by serial numbers	EU countries	Not mandatory in the Agreement. The vessel retains the same number on the file, no matter where it is registered in the EU. Problems arise if the vessel is sold outside of the EU. Following an export declaration the vessel is removed from the EU file. If the same vessel, after some time, is repurchased by an EU owner (import declaration) the vessel retains the original identification number only if the owner knows it, otherwise it is assigned a new number. In HSVAR all EU vessels have this number (2634 vessels). This number should become mandatory