Report of the meeting of the Global Record Specialized Core Working Groups

FAO Headquarters, Rome

30 September - 2 October 2015

Table of Contents

ABBREVIATIONS AND ACRONYMS VIII
1. INTRODUCTION 1
2. GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON DATA REQUIREMENTS (GRCG-DR) 2
2.1. Inclusion Levels 2
2.2. VESSEL DETAILS 3
2.3. HISTORICAL DETAILS 6
2.4. AUTHORISATION DETAILS 6
2.5. INSPECTION AND SURVEILLANCE DETAILS 7
2.6. PORT ENTRY DENIALS 9
2.7. OTHER MATTERS 10
3. GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON THIRD PARTY DATA (GRCG-TP) 10
3.1. Role & Relationships of IHS-M 10
3.2. EQUASIS 11
3.3. GISIS information system (IMO) 12
3.4. INTERPOL Purple Notices 12
3.5. RFMO IUU Lists 13
4. GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON DATA EXCHANGE (GRCG-DE) 13
4.1. Data Format Standards 13
4.2. Data Transmission Mechanisms 15
4.3. Capacity Development 17
5. CONCLUSION 18
APPENDIX A 19
INVITATION TO THE MEETING OF THE GLOBAL RECORD SPECIALISED CORE WORKING GROUPS ON DATA REQUIREMENTS, DATA EXCHANGE AND THIRD PARTY DATA 19
ANNEX 1 20
GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON DATA REQUIREMENTS (GRCG-DR) 20
Terms of Reference and Expert Profile 20
GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON DATA EXCHANGE (GRCG-DE) 21
Terms of Reference and Expert Profile 21
GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON THIRD PARTY DATA (GRCG-TP) 22

Terms of Reference and Expert Profile 22
ANNEX 2 23
PROVISIONAL AGENDA* 23
APPENDIX B 24
CONCLUSIONS, CONFIRMATIONS AND PENDING ITEMS 24
GRCG-DR 24
GRCG-DE 26
GRCG-TP 26
APPENDIX C 28
LIST OF PARTICIPANTS 28
APPENDIX D 31
GRCG-DR/2015/03: DATA REQUIREMENTS FOR THE GLOBAL RECORD 31
Information Modules 31
Reference Lists 40
APPENDIX E 45
GRCG-TP/2015/03: DISCUSSION ITEMS ON THIRD PARTY DATA (GRCG-TP) 45
IHS Maritime 45
EQUASIS 46
Possible role: 46
GISIS (IMO) 47
IUU lists of RFMOs 48
INTERPOL Purple Notices 48
Any other relevant and certified data source 48
APPENDIX F 49
GRCG-DE/2015/03: DATA EXCHANGE OPTIONS FOR THE GLOBAL RECORD 49
Data Format Standards 49
Data Transmission Mechanisms 50

ABBREVIATIONS AND ACRONYMS

AIS	Automatic Identification System
API	Application Programming Interface
CLAV	Consolidated List of Authorized Vessels
COFI	FAO Committee on Fisheries
CSV	Comma-separated Values
DG MARE	Directorate-General of the European Commission for Maritime Affairs and Fisheries Commission
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIRO	Fishing Operations and Technology Branch (FAO, Fisheries and Aquaculture Department
FLUX	Fisheries Language for Universal eXchange
GFCM	General Fisheries Commission for the Mediterranean of the FAO
GRCGs	Global Record Specialised Core Working Groups
GRWG	Global Record Informal Open-Ended Technical and Advisory Working Group
GRCG-DE	Global Record Specialised Core Working Group on Data Exchange
GRCG-DR	Global Record Specialised Core Working Group on Data Requirements
GRCG-TP	Global Record Specialised Core Working Group on Third Party Data
GRT	Gross Registered Tonnage
GT	Gross Tonnage
IHS-M	IHS Maritime & Trade
IMO	International Maritime Organization
IUU Fishing	Illegal, Unreported and Unregulated fishing
JSON	JavaScript Object Notation
LOA	Length Overall
MCS	Monitoring, Control and Surveillance
MMSI	Maritime Mobile Service Identity
OSPESCA	Organización del Sector Pesquero y Acuícola del Istmo Centroamericano
PSC	Port State Control
PSMA	Port State Measures Agreement
RFMO	Regional Fisheries Management Organization
SEAFDEC	Southeast Asian Fisheries Development Center
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
UN/LOCODE	United Nations Code for Trade and Transport Locations
UVI	Global Record Unique Vessel Identifier
VMS	Vessel Monitoring System
VRMF	Vessel Record Management Framework
XML	Extensible Markup Language

1. INTRODUCTION

Mr. Ari Gudmundsson, Global Record Coordinator and Officer-in-Charge FIRO, FAO, welcomed participants to the meeting.

Ms. Alicia Mosteiro, Global Record Technical Manager, introduced the main agenda sections and the general arrangements for the meeting of the three Global Record Specialised Core Working Groups (GRCGs).

As an update for new participants, Ms. Mosteiro reminded participants that the Global Record is an international tool to fight Illegal, Unreported and Unregulated (IUU) fishing, initially requested at a Ministerial Meeting in 2005 and supported by subsequent Committee on Fisheries (COFI) sessions. COFI 31 endorsed the use of the IMO number as the Unique Vessel Identifier (UVI) of Phase 1 of the Global Record (100 GT and above), and some Members recognised the need for an advisory committee to guide the development of the Global Record, building on the Strategy document and the prototype system presented to COFI. Therefore, the Global Record Open-Ended Technical and Advisory Working Group (GRWG) was created, to clarify outstanding issues and to find solutions for the long-term sustainability of the Global Record.

Ms. Mosteiro recalled that the first meeting of the GRWG, held in February 2015 and attended by Members and Observers, recommended setting up a number of specialised core working groups to address technical issues in further detail. These groups have been working through virtual workspaces prior to this meeting, and relevant documentation was made available for preparatory discussion. Experts participate in their personal capacity, and the objective is to build a community of experts to discuss relevant matters in detail and put forward technical advice to the GRWG for consideration. The GRCGs will continue to work after this meeting, building on the conclusions reached and addressing new or outstanding issues, according to the Terms of Reference of each group (see Appendix A – Annex 1). Should it be necessary, a second meeting of the GRCGs will be held, either by audio conference or in person, before the second GRWG meeting, which is scheduled for the first quarter of 2016.

Ms. Mosteiro updated participants on the current status of implementation of the Global Record programme, including financial difficulties due to delays in the provision of funds and the activities carried out to date, and recalled the targets set for the next session of COFI in July 2016. She explained the need to adjust the programme workplan towards preparing a pilot version of the system for COFI 32, together with Technical Guidelines summarising the outcomes of the GRWG and GRCGs meetings and the feedback from the pilot. She stressed the importance of encouraging participation from a few partners at this crucial stage to provide data to the pilot system and, time allowing, prepare a demonstration for COFI 32.

This informal meeting of the GRCGs, held in English, was facilitated by the Global Record Secretariat, including Mr. Ari Gudmundsson, Ms. Alicia Mosteiro, Ms. Dawn Borg Costanzi, Global Record Data Analyst and Developer, and Mr. Pio Manoa, Legal Officer, FAO.

Experts from a number of geographical areas and varied expertise were physically present at the meeting and other experts joined the meeting through the Audio-Conferencing facility.

2. GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON DATA REQUIREMENTS (GRCG-DR)

The Global Record Secretariat reminded participants of the objectives of this first meeting of the GRCG-DR, as per items 1 to 4 of the Terms of Reference and work plan: to agree on the data modules, data fields, priority level, definitions and reference lists and particular data requirements for non-fishing vessels.

As detailed in the Global Record Strategy Document, the information modules initially proposed include:

(i) vessel details,
(ii) historical details,
(iii) authorisation details,
(iv) compliance details.

In addition two new modules, as suggested by GRWG, were defined:

(i) port entry denials, and
(ii) IUU list.

The working group proceeded by addressing module by module, reviewing comments made through the virtual workspace and, where necessary, making recommendations to adjust the tables in GRCG-DR/2015/03 (see Appendix D). The Vessel, Historical and Authorisation details were developed through a study of international instruments and regional systems and major changes were not expected, whereas the other information modules required more in-depth discussion.

The following is a report of the main topics that were considered. Conclusions, mainly resulting from suggestions made during virtual discussions prior to the meeting, which were reached with no objections or discussion are not included here, but are listed in Appendix B.

2.1. INCLUSION LEVELS

It was recognised that proper definitions of the levels of priority were needed to fully understand the minimum requirements and varying importance of the information needed to assess possible IUU activities.

The definitions of the priority levels are as follows:

Essential: the minimum data field requirements that must be satisfied for a Vessel record to be included into the Global Record.

High Priority: data fields that, together with the essential ones, provide sufficient support information to detect possible IUU fishing activities carried out by a specific vessel. Members are strongly encouraged to provide as many of these fields as possible for the system to be effective.

Low Priority: other additional data fields that provide interesting information that may support the assessment of IUU fishing activity. Members are encouraged to provide these when available.

This system intends to provide sufficient flexibility for the variety of situations found in the national information systems of Members. The aim is to facilitate participation from the initial stage, whilst keeping the system as useful and simple as possible.

2.2. VESSEL DETAILS

2.2.1. Essential Fields

A total of five data fields were recommended to have Essential as an inclusion level, namely: UVI, Current Flag State, Vessel Name, LOA, and GT (GRT is acceptable in the absence of GT). These fields constitute the minimum data requirements of the Global Record, and are the only fields that are strictly required to enter information into the Global Record. Further fields which were suggested to be Essential during virtual discussions prior to the meeting were considered, but their exclusion from the list of prerequisites was justified by the group.

2.2.2. Identification

UVI/IMO Number

The group was reminded that the UVI, as a key component of the Global Record is a pre-requisite for inclusion of a vessel record and will be used for identification and linking of different information sets. The Secretariat also explained the amendment of the IMO Ship identification Number Scheme to include fishing vessels of 100GT and over, and that COFI endorsed the use of the IMO Number as the UVI for Phase 1 of the Global Record.

Experts also raised questions about the proposed UVI for Phases 2 and 3, that is vessels of less than 100GT and were reminded that COFI recommended to focus on Phase 1 for the time being, with the GRWG agreeing that a feasibility study on Phases 2 and 3 will be carried out in due course, including analysis of the UVI for smaller vessels.

MMSI

A discussion arose on the priority level of the MMSI. Some participants shared their experience with the use of MMSI numbers, especially in the case that other identification numbers are not available, whereas others reported that the MMSI is not available in their systems. It was agreed that the MMSI would be useful to have, if available, but should be kept as Low Priority in the Global Record.

AIS Information

Some experts proposed the inclusion of AIS identification in the Global Record, due to its linking function with other systems such as VMS, and as it increases transparency as AIS information is publicly available. Others voiced concern over the use of AIS, which is designed as a safety mechanism, for control purposes, which could encourage fishers to turn off the system and put themselves in danger. Another factor against the use of AIS is that the vessel's identity can be changed. However, the group recognised the widespread use of AIS, including for security and control purposes, and for historical location information. In understanding, also, that many vessels are not equipped with AIS, it was agreed that AIS details should be reported whenever available. Thus, an indicator of AIS presence and a field for AIS details were recommended for inclusion in the Global Record, both with a Low Priority inclusion level.

VMS Details

The topic of VMS information was addressed by the group, in particular in relation to the VMS Type mentioned in the PSMA, and the indication of whether the installed VMS is part of a national or regional system. In recognising that VMS details are more structured and standardised for data transmission that other field, the group recommended exercising caution in disseminating VMS details, indicating that the presence or absence of VMS is of highest importance in fighting IUU fishing. It was decided that the VMS Indicator and VMS Details fields would remain unchanged, but that the group should consider the inclusion of an indicator of whether the VMS is national or regional. This will be addressed by the GRCG-DR in future discussions through the virtual groups.

2.2.3. Registration

National Registration Number

A query was raised within the group about whether the National Registration Number and External Marking were the same. It was clarified that this depends on the procedures of the flag State, but in any case the National Registration Number, which is included in the fishing licence, is of key importance in cross-checking and linking with national records, and is also used for auditing by the IMO. In recognising that some IUU vessels may be stateless, it was agreed that the Inclusion Level for the National Registration Number would be retained with a High Priority inclusion level, rather than Essential as proposed during virtual discussions.

Vessel Name

Experts drew attention to the fact that, often, States record vessel names in their local alphabet, which may cause issues with interpretation and the character set for data exchange. However, it is not always possible to translate the name to English or Latin characters. It was recommended to include a further data field to record the vessel name in English, with Low Priority, and to specify that the Vessel Name field refers to the vessel name as registered in the national register. Technical issues related to the exchange of international vessel names will be dealt with by the GRCG-DE.

Operational Status

Participants requested clarification of the definition of Operational Status and raised concerns about ensuring that the information is valid and current, also considering the fact that the frequency of data transmission is yet to be decided upon. With reference to the proposed options for this field, according to GRCG-DR/2015/03, the Secretariat clarified that the Global Record will also contain records of vessels which are not currently active and that should be identified as such. The group agreed that an indication of whether the vessel is active or otherwise is very useful for validation and identifying suspicious behaviour, yet recognised the difficulty of the flag State in reporting the correct information. Therefore, it was suggested that the field be changed to a Boolean indicator of the vessel being Active or Inactive, with the definition of each needing to be clearly defined, and with more information being available by looking at the Authorisation information. After considering the option of adding a related date and increasing the inclusion level, it was confirmed that the inclusion level should remain Low Priority, indicating that it should only be reported if its accuracy can be reasonably guaranteed.

2.2.4. Dimensions

GT

The group discussed the different tonnage conventions and their use in global legal frameworks. Although it is clear that GT is preferable, there are still many States in which GRT, as a national measure of tonnage, is used. Therefore, it was agreed that GT remains an Essential data field, but in its absence, GRT may be accepted.

Engine Manufacturer

The inclusion of Engine Manufacturer in the Global Record was suggested during discussions prior to the meeting, in the virtual workspace. Experts noted the serial number of the vessel's engine would be more relevant to the fight against IUU fishing than the manufacturer, but that there may be many instances in which this information is not recorded by the national administrations, although it would be more important at a national level than globally. Also, there is no reference to these fields in international instruments that the Global Record will be supporting. Therefore, whilst recognising that further information about engines would be nice to have, it was decided to retain the fields related to the engine without changes, and not to include any further fields.

Fish Hold Capacity

A new field, Fish Hold Capacity, was put forward for consideration by the group after being mentioned for inclusion during discussions prior to the meeting. Although this field is not found in international instruments, or traditionally included in vessel records, it could increase traceability and provide valuable information when cross-checking the volume of catch landed or transhipped.

The group was informed that the hold capacity for carrier vessels is disseminated through the Equasis systems, and some experts supported its inclusion in the Global Record, particularly for fishing vessels, along with the specification of the type of hold. Other participants raised concerns about broadening the data requirements too far, as this may jeopardise data collection by increasing State difficulty in providing the information, and suggested leaving additional, and non-critical, information for inclusion at a later stage. Also, a clear definition of the fish hold capacity would be required, considering that some vessels use containers on deck and other such equipment which needs to be considered. Whilst recognising the importance of having such information for effective control, a conclusion on the inclusion of this data field was not reached during the meeting. The matter remains pending for the GRCG-DR, and supporters of the proposal volunteered to give a short presentation of the advantages of including such information, at the earliest opportunity.

2.2.5. Construction

The group recommended changing the inclusion level of both the Year of Construction and Country of Construction to Low Priority, as suggested by an expert during virtual discussions. Although this information is useful for assigning an identification number to a vessel, its value in fighting IUU fishing is relatively low.

2.2.6. Ownership

Owner, Operator/Manager and Beneficial Owner IMO Company Number

The group was informed that, as well as an IMO Number for vessels, there is also an IMO Company Number for vessel owners and operators/managers, which allows for clear identification of companies with interest in a vessel. A suggestion was put forward to include the IMO Company Number for the owner, operator/manager and beneficial owner of the vessel, all with Low Priority inclusion level due to the low coverage for fishing vessels.

Owner, Operator/Manager and Beneficial Owner IMO Address

The group recognised the importance of recording the address, and other contact details, of the owners, operators and beneficial owners of vessels, so that they may be contacted in the case of administrative procedures being carried out. Therefore, it was recommended to change the inclusion level of each to High Priority.

Potential sensitivity related to the disclosure of ownership information, in particular the address, was also discussed, with general agreement that this depends on State legislation and, since none of the fields are Essential, the State will decide on the possibility of sharing this information or otherwise.

Owner, Operator/Manager and Beneficial Owner IMO Nationality

Concerning the nationality of the owner, operator/manager and beneficial owner, the Secretariat explained that these fields had been included due to the mention of the nationality of the master and fishing master in the PSMA. The group considered this requirement too ambitious for the time being, and of relatively low importance to Global Record, and recommended removing all data fields related to nationality from the Ownership section.

Master and Fishing Master

The group recognised the importance of identifying the master and fishing master of a vessel in the case of suspected IUU fishing activity, yet noted that there may be a risk associated with revealing personal details. Also, such information is volatile and may change from trip to trip and, given that such frequent updates to Global Record data are highly unlikely, it was decided to remove all fields related to the Master and Fishing Master from the Vessel details. The possibility of including this information in the Inspection and Surveillance information module will be considered by the group, at a later stage.

2.2.7. Gear

In noting that modern vessels are often multi-purpose and have multiple gears, and that gear information is available under the Authorisation information module, it was suggested that the Gear section be removed from the Vessel details. Although gear information is useful during inspections, and many RFMOs collect such information, it would be difficult to maintain in the Global Record and not particularly necessary if the Vessel Type is present, so the group agreed to remove this section.

2.2.8. Picture

Participants commented on the difficulty of maintaining vessel pictures in the Global Record, and the need for high resolution photos. However, the utility of images for control and verification purposes was highlighted, especially in order to identify vessels that attempt to hide their identity. It was also noted that various RFMOs require vessel pictures when issuing authorisations. Therefore, the group recommended including vessel pictures, albeit with Low Priority.

Picture Type

Participants agreed that there was little value in collecting the Picture Type data field, and recommended its removal.

Picture Details

The group agreed on the importance of having further information on the picture, such as the date and location, and the source of the image to avoid issues with royalties and copyright. However, it was decided to keep a textual field for recording of all available information related to the picture, without restrictions.

2.3. HISTORICAL DETAILS

The group discussed the importance of this information module, for traceability and to avoid problems with vessel registration, including flag hopping. It was recommended that all the fields have an inclusion level of High Priority. Participants also highlighted the difference between the effective date of a change in value and the date of communication of the change to the Global Record, and emphasised that it is the effective date of change that should be recorded.

Operator/Manager

The need to trace the history of chartering was brought up, and, in this regard, the group recommended to add a section to the Historical details to record the Previous Operator/Manager Name and Operator/Manager Change Date, both with High Priority.

2.4. AUTHORISATION DETAILS

A general discussion about the inclusion of Authorisation information within the Global Record opened up this agenda item. Some experts raised concerns that such information falls under a different domain to Vessels, and requires real-time updates in order to ensure completeness and correctness with systems where fishing rights and quotas may be bought on the spot and even at sea, which makes

maintenance difficult. It was questioned whether there should be a separate system to record licences globally. The Secretariat clarified that the GRWG agreed on the importance of such information and recommended the inclusion of Authorisation details, which form a separate information module and are separate from Vessel details, with the data possibly being provided by different administrations. The group was also reminded that licencing and authorisations are highly relevant to IUU fishing, the PSMA and risk analysis; that RFMOs require fishing vessels to be licenced to fish in international waters; and that it would be very useful for the Global Record to make such information publicly available. It was highlighted that, in the framework of international regulations, it is critical to record, at minimum, authorisations from RFMOs and those related to fishing in the high seas, although the RFMO or flag State may have to be consulted for final confirmation. It was concluded that this is an issue related to the scope of the Global Record and should be dealt with by the GRWG in future discussions.

Experts noted the difference between a fishing licence and a specific authorisation for certain species, areas or timeframes, and the need to distinguish between such documents and clarify definitions according to the varying terminology in national legislation. In using the same information module to record this information, it was recommended that a single record allow multiple instances of Authorised Area, Species and Gear.

The group was also reminded that transhipment authorisations are also of interest to the Global Record and should also be specified.

Participants also recognised the need for standardisation of the information related to licences, authorisations and permits, and encouraged the FAO to discuss requirements with the various RFMOs.

Reason for Revocation

The group discussed the need to collect information related to the revocation of an authorisation, highlighting that it may be useful when carrying out risk assessment and is imperative to know whether the licence or authorisation is still valid at a certain point in time. It was also noted that national administrations record such details, which should be shared, but it may be the case that different administrations issue the licence or authorisation and then revoke it as a consequence of an infringement. As a result, the group decided to keep this data field in the Authorisation information module, but will also consider it under the Inspection and Surveillance module, as an outcome of an infringement.

The data type for this field remains pending, whether an alphanumeric field for textual details or a reference list from which one option may be selected, and will be analysed by the group during the next round of discussions.

2.5. INSPECTION AND SURVEILLANCE DETAILS

The Secretariat introduced this information module, which was previously named ‘Compliance Details’, and explained that this module was proposed in the Global Record Strategy Document and supported by the GRWG, but still requires much work for proper definition. The aim is to record information what would support the implementation of the PSMA, in particular risk analysis. Two options were put forward for discussion: the first as proposed in the Strategy Document, with minor changes, and the second resulting from discussions during the first meeting of the GRWG. During GRCG-DR discussions prior to the meeting, preference for the first option was shown, and this was confirmed by the group. It was also reiterated that all inspection results should be recorded, and not only those which resulted in an infringement, and this led the group to recommend changing the name of the information module to ‘Inspection and Surveillance’. In addition, details of sightings could also be recorded.

A concern was raised regarding the legal basis necessary to be able to exchange information related to infringements, due to its sensitive nature. The difference between infringements and alleged

infringements was also highlighted, with attention to be put on clear definitions. The group also considered the fact that there may be problems with sharing information until issues are considered under a legal procedure by a legal body, and confirmed to be infringements. The Secretariat clarified that it would be up to the State to determine what information may be disclosed, and when, and would also likely depend on the operation of PSM. A suggestion was also made to consult with the PSC regimes of the maritime world, which allow for publication of details related to inspections and detentions within days.

Report Type

The name of this field was originally 'Source', but the group recommended the change to avoid confusion with the source of the data (data provider).

Some experts also suggested the addition of Observer Programmes as an option for the report type, as these programmes generate a number of reports and, in some countries, are not restricted to biological studies. However, the group agreed that, in most cases, such reports do not allow for any procedures which lead to sanctioning under a control regime and would require a different set of data to be recorded. Also, it is important to keep the safety of observers in mind. Therefore, the inclusion of this new option was not recommended.

A potential terminology issue was also highlighted, as the options include 'Port inspection', 'At sea inspection' and 'Transhipment inspection', but the transhipment may happen at sea or in port. However, refinement of this reference list will be considered at a later stage, if necessary.

Authority Role

Participants noted the need to specify the scheme under which the inspection was carried out, as States have different responsibilities and obligations in the role of flag States, port states or coastal States. It would also be useful to indicate whether the inspection was carried out under a scheme of international inspection adopted by an RFMO. Therefore, it was recommended to include a new field entitled 'Authority Role' with the following options to be selected from: Flag State, Port State, Coastal State or RFMO Inspection Scheme.

Infringement/Apparent Infringement

The discussion on this topic revolved around the definition of a reference list for infringements, to harmonise what is reported internationally, as free text would be difficult to analyse and use. To date, instruments such as the PSMA have not provided a reference list for infringements, but, given that the Global Record is a voluntary initiative, the participants agreed that this would be a good opportunity to go into further detail, in support of the work of inspectors, mainly.

The group agreed on the second Option presented in the discussion document, which is that based on the list of Serious Violations in the UN Fish Stocks Agreement. However, the list would need to be extended to include the option of 'None' (no infringements), and the 'Other' option should instruct the reported to include further textual details. Several experts also recommended to continue working on this list to be able to assign a severity level or category to each of the listed options, thus translating to a more general list similar to the first option that was proposed, although that could be subjective in nature. This will be followed-up on by the group through virtual discussions.

Outcome and Outcome Details

The group recognised the importance of reporting the outcome of any process resulting from the identification of an apparent infringement, for transparency, and therefore setting the inclusion level to High Priority, and of rationalising each of the potential outcomes. The differences between administrative and criminal sanctions were discussed, and it was agreed that each option proposed in

the Infringement Outcome reference list could be either administrative or criminal. Therefore, it was recommended to remove the option 'Criminal sanction'.

The experts also noted that the action taken is a lengthy process but might also result in no sanction at all, so the option 'No sanction' should be included in the reference list, and the reporter instructed to give further details. Similarly, selection of 'Other' as an outcome should also include some specifics. Therefore, a new textual field, with Low Priority, entitled 'Outcome Details' should be added.

It was pointed out that information related to the Outcome would be provided at a later stage, and possibly by a different State administration in the case, for example, that the coastal State reports an infringement but action is taken by the flag State. The possibly of double sanctions for a single infringement should also be considered. To handle such situations, the Outcome and Outcome Details may need to be considered as a separate information module, and therefore would need a unique identifier for the Inspection and Surveillance record. This will be decided, at a technical level, by the Secretariat, based on the future discussions of the GRCG-DR on the data providers of each information module.

2.6. PORT ENTRY DENIALS

The group confirmed their agreement with the GRWG recommendation to record only the denials of entry into port, and not all entries.

Port Reference[1]

The group considered the two options put forward in the discussion document for the Port reference list: using the UN/LOCODE list, or putting together a specific list of ports for the Global Record. The former was excluded, as UN/LOCODE is not a comprehensive list of ports and some experts reported many issues they encountered in attempting to extend, or use, this list. In recognising that using text to report the port name is not a suitable option, as it would result in inconsistencies and analysis would be impossible, the group expressed its preference for the second option, that is the Global Record building a list of ports, including a reference code, as recorded by the data providers.

The group noted that, according to the PSMA, port States will need to designate their ports where foreign-flagged vessels are allowed to land. However, a port entry denial is not restricted to a designated port, and therefore a list of designated ports would not be comprehensive. In understanding that there is a potential maintenance issue related to the Global Record collecting a list of all ports from each party, it was agreed that port States would have to be responsible for communicated their list of ports, and that the details related to sure a procedure would need to be discussed by the group at a later stage.

Port

In order to avoid misunderstandings and terminology issues, the group recommended that the 'Port of Call' field be renamed to 'Port', as a vessel's port of call generally refers to historical activity and not the port to which entry has been denied.

Reason for Denial

Participants assessed the advantages of creating a reference list for this data field, rather than allowing free text, which would not allow for analysis but would simplify matters by allowing recording of all cases. The group questioned what the main reasons for denying entry into port would be, and whether there are any reasons other than inclusion on an IUU list for port entry to be denied. It was clarified that port entry denial is not restricted to IUU activity, but may also be linked to administrative

[1] This applies to for every field that makes use of the Port reference list.

procedure or other factors such as trade measures. It was concluded that further discussion would be necessary to take a decision on this matter.

2.7. OTHER MATTERS

The group was informed that the new implementing rules of the Control regulation for the EU[2] had just been approved, including reference to the IMO Number, in preparation for provision of data to the Global Record. The new regulation makes the IMO Number mandatory for all third country fishing vessels authorised to carry out fishing activities in European Union waters, all European Union vessels fishing outside the EU of 15m length overall or above, as well as European vessels of 100GT or 24m and above, wherever they fish.

3. GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON THIRD PARTY DATA (GRCG-TP)

The Global Record Secretariat welcomed the participants to the meeting and reminded them of the aim of the GRCG-TP: to provide guidance to the Global Record Secretariat, through recommendations to be put forward to the GRWG, in relation to the role that third parties have to play in the Global Record. Whereas the official data providers will have to actively submit data, different approaches may be considered for the integration of third parties, if necessary. Some proposals for the incorporation of third party information were put forward through the prototype system, and the main issues to be discussed where highlighted in the discussion document GRCG-TP/2015/03 (see Appendix E).

3.1. ROLE & RELATIONSHIPS OF IHS-M

Different possible roles for IHS-M data were put forward in the discussion document, namely:

(i) Interim data provider for vessel information (Vessel Details information module)
(ii) Source of historical information (Historical Details information module)
(iii) Cross-checking of information

The Global Record Secretariat explained each of the options presented in the discussion document, as well as what was meant by the use of IHS-M data as an interim measure: that a vessel's data received from IHS-M would be replaced by State data once received from the official data provider. In each case, a record of information module would be considered as a whole, and information from different data providers would not be used for different fields of the same record. The group was reminded that the Global Record fields decided by the GRCG-DR would be those considered, regardless of whether IHS-M has extra information available.

Experts from IHS-M also gave some history about the company, described the operations related to the issuing of IMO Numbers for vessels, and also informed the group of the availability of SeaWeb, an online system providing access to IHS-M data. Having a link from the Global Record to SeaWeb could provide another possibility for using IHS-M information without it being directly submitted or included within the Global Record.

It was noted that the use of multiple sources of information strengthens the quality of the information, and that the way that IHS-M deals with data inconsistencies ensures that information is as correct as possible. However, the group reiterated that the ultimate responsibility for providing the data lies with the States, as previously stated by the GRWG and COFI. The group also considered that the display of varying information from different sources, including third parties, could improve transparency, as one of the main objectives of the Global Record, but agreed that the Global Record

[2] Commission Implementing Regulation (EU) 2015/1962 of 28 October 2015 amending Implementing Regulation (EU) No 404/2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2015.287.01.0006.01.ENG.

should only contain certified information. The value of IHS-M data was recognised, and some experts were favourable towards the inclusion of third party data directly within the Global Record, given that the source of the data would be clearly indicated. Yet, overall, the group indicated its overall preference to consider linking to SeaWeb externally, either as an interim measure or long-term functionality, rather than direct integration; as the latter would require State confirmation of data.

Whilst understanding the value of interim solutions in demonstrating the utility of the Global Record as soon as possible, some experts also expressed concern about implementation of interim solutions and suggested that conditions to avoid permanence could be put in place, if interim solutions are accepted. Experts also raised questions about the potential financial implications of using IHS-M data, and the Secretariat was requested to obtain further details for this group to be able to discuss in further depth. It was also agreed that this issue should be overseen by the GRWG.

The issue of historical information was also discussed, keeping in mind that the GRWG recommended the inclusion of history even prior to the establishment of the Global Record system. The group was informed that IHS-M collects historical information, audits it thoroughly and corrects it when necessary, and also makes it available through SeaWeb. Experts remarked on the value and accuracy of this information, and recommended against the Global Record generating its own history through analysis of record changes over time. However, experts cautioned on the use of IHS-M data without clear State endorsement, also in the case of historical information, and reiterated the preference of having State authorities as data providers. In addition, the utility of having further historical information through an external link was recognised.

The potential improvement of the quality of Global Record information through cross-checking and reconciling of information, and the usefulness of the IMO number in this respect, was highlighted. However, questions were raised as to whether the Global Record should carry out such a function. In understanding FAO's sensitivity to State responsibility, it was agreed that a system of verification should be put in place and the Global Record could notify of conflicting information but not attempt to correct the information as, in any case, the official information from the State takes priority. It was also noted that IHS-M already exchanges data with flag States and enters into discussions with flag States in connection with its management of the IMO Numbering Scheme, and therefore carrying out checks between State information and IHS-M data within the Global Record system may be redundant.

The possibility of implementing a feedback mechanism, for system users to make comments and indicate errors in information, was also discussed. The group was in favour of such functionality, as a way to increase transparency and the contribution of the Global Record to risk assessment. The related details, such as which users would be able to give feedback, whether feedback would be publicly visible in the Global Record, and other such details, will be analysed by this group at a later stage. All potential procedures for quality control, included the above-mentioned cross-checking, if any, will also have to be defined by this group, according to its Terms of Reference.

Concerning the provision of any sort of information by Members, the group reiterated its understanding also that States may require changes in legislation and official procedures to be able to provide data to the Global Record. In this regard, the need for a standard approach to dealing with provision of information, and for capacity development, was repeated. The role of RFMOs in the facilitation of data provision was highlighted, as organisations delegated by the States to submit information to the Global Record, and key parties in the reporting chain. Also, the potential of having the Global Record as a central node, which disseminates information to other parties such as RFMOs, and the need for standardisation, was mentioned. Such issues, which relate to data and its provision rather than third party data, will be considered by the GRCG-DR and GRCG-DE.

3.2. EQUASIS

The Global Record secretariat introduced EQUASIS as a record of merchant ships, presenting similarities with the Global Record, but with the aim of reducing substandard shipping. As the Global Record also includes refrigerated and supply vessels that may be involved in illegal fishing activities, it may be useful to create a deep hyperlink from the Global Record to EQUASIS, as was implemented as part of the prototype system. EQUASIS comprises various information from port state MoUs, insurance companies, classification societies, and more, which would be complementary to the Global Record information modules that remain the priority and will be provided by States. The group was informed that the vessel information within EQUASIS is IHS-M data, supplied under contract. Accessing this data by hyperlink from the Global Record, rather than incorporating it directly, would therefore be consistent with principles mentioned earlier, as that this data is not endorsed by the flag State.

Participants were also reminded that, in order to create hyperlink to EQUASIS, the refrigerated and supply vessel must be identified and an IMO number provided as the UVI. Thus, information is still absolutely required from the flag States. EQUASIS does not provide information on transhipment authorisations, for example, which are critical to the Global Record and must also be provided by the States.

Although the group established that the information available through EQUASIS is not always up-to-date, the feasibility of negotiating separately with each entity providing information to EQUASIS was questioned. No change to the proposal was advised.

On a separate note, the group was informed that the EU is working to join their register of fishing vessels with the database on vessels that support fishing, which are currently separate.

3.3. GISIS INFORMATION SYSTEM (IMO)

The GISIS information system, proposed at the first meeting of the GRWG by the IMO representative, was considered by the group. The group was reminded of the type of information made available by GISIS, such as pollution prevention information, reports of piracy and marine incidents; as well as the recently-recognised connections between safety at sea, forced labour and IUU fishing. The overall consensus was that GISIS provides interesting supplementary information but is not necessarily relevant to fighting IUU fishing, and therefore the creation of a link between the Global Record and GISIS is not a priority at this point. Discussion could reopen, if additional information is put forward to the group, or interest is shown at a later stage.

The issue of whether GISIS information is public and can be made accessible through the Global Record, especially seeing that the Vessel details are IHS-M values, was brought up. It was decided that such issues will be looked into later, directly with IMO, should it be established that a link to GISIS from the Global Record could prove to be beneficial.

3.4. INTERPOL PURPLE NOTICES

With regards to INTERPOL, the group was informed that the Global Record Secretariat has been in contact with INTERPOL's experts on Fisheries crime, although they were not able to participate in the meeting.

The procedure for INTERPOL's Purple Notices on Fisheries crime was described: the information in these notices generally originates from member States' sightings, and is also passed onto the relevant RFMOs, to be included on their websites as commission circulars in the private domain. INTERPOL Purple Notices contain very useful information, including background, historical details, beneficiary names, photos, and documents, often related to vessels which are also listed on RFMO IUU vessel lists, and are in the public domain. INTERPOL is a State organisation, which have recently started to focus on fisheries and environmental crime, particularly through Project Scale. Therefore, the ultimate responsibility for a purple notice lies with a State.

The group recognised the value of creating a link from the Global Record to purple notices on INTERPOL's website, in the case that they are linked directly to a vessel, which will be of particular use for port States and inspectors carrying out risk analysis. Supporting technical details will be discussed separately. The interest in collaboration with INTERPOL was also reiterated.

3.5. RFMO IUU LISTS

With reference to the discussion on the IUU Lists information module, the inclusion of which was agreed upon by the GRCG-DR, an indication of absence/presence on a list would be available in Global Record, but an external link would provide the related details.

The group was reminded of the clear mandate of RFMOs to work together, as supported by several international instruments, and to fight IUU fishing. Experts were also informed that the GFCM has compiled its own IUU list, which comprises all vessels on other non-FAO RFMOs' IUU lists, and that it would be possible to share this list with FAO and the Global Record.

The issue of different RFMOs using different criteria to list vessels was brought up. It was clarified that the responsibility of each IUU list lies with the relevant RFMO, according to its internal procedures. Thus, the RFMO is the most appropriate body to communicate the basic information related to the listing or delisting, possibly through the compliance officer, and the Global Record should refer directly to the RFMO for full details, through an external link. The value of including the history of IUU listing/delisting for a vessel was also highlighted, as vessels may be removed from RFMO IUU lists.

The importance of the collaboration of RFMOs was reiterated.

The group was also updated on a GFCM initiative to identify IUU fishing activity, through the use of public information and direct investigation by its contracting parties. The efficiency of alerting States about suspicious behaviour; exchanging information between State authorities, RFMOs and NGOs; and supplementing official evidence with public information was highlighted as an effective way to fight IUU fishing through strengthened collaboration.

4. GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON DATA EXCHANGE (GRCG-DE)

The GRCG-DE met to discuss the data formats and exchange mechanisms for data providers to submit information to the Global Record, keeping in mind that the GRWG recognised the importance of defining a limited set of standards to keep the system cost-effective, manageable and scalable, whilst ensuring consideration of the varying capabilities and requirements of States.

The meeting first discussed the pros and cons of various data formats, considering the possibilities currently available in various State administrations. The focus was on acceptability and effectiveness of the formats in general, with detailed technical discussion, including specifications of format implementation and file structures, deferred to the virtual working space or future meetings.

In the second part of the meeting, participants considered the options for data transmission, from the point of view of ease of implementation and operation, security and durability.

For both discussions, it was clarified that work will be further discussed and developed through the virtual workspace.

4.1. DATA FORMAT STANDARDS

Following the discussion document GRCG-DE/2015/03 (see Appendix F), three data formats were considered:

- CSV
- JSON

- XML files, including UN/CEFACT

CSV (comma-separated values) files were introduced, indicating that, although they are simple and widely used, they have a number of problems, including delimiters and the need for the development of robust processing procedures. Nevertheless, they may be appropriate for developing countries since they can be opened in spreadsheet software and therefore they are manually modifiable. However, given these limitations, other, more advanced, formats should be considered.

Concerning XML files, these are highly structured, more robust and easier to process. An information system is required to generate and interpret them. XML format allows reporting of hierarchies and complex structures, which is especially useful for reporting different information modules in a single file, and to express repetition of fields. The group was informed that UN/CEFACT standardises XML schemas, including fisheries information, with one domain for vessels. Each application of a UN/CEFACT standard requires implementation specifications, to customise the generic UN/CEFACT standard to the particular situation at hand.

With regards to JSON, this is a format that is structured but not schema-based, and requires the set-up of a processing mechanism. So it lies between CSV and XML: not as troublesome as CSV but not as advanced as XML, which also has many standard tools that are already available to reduce the complexity of dealing with such files.

The group noted some negative aspects of CSV files. Firstly, it is difficult to interpret what values represent by looking at a file. In line with this, it was also clarified that, with XML, it is possible to add additional information by specifying attributes. Secondly, since a controlling mechanism has to be specifically implemented, any change in the structure involves quite some effort as a renewed agreement between exchanging parties, as well as system changes, are required. Although CSV is useable, it was agreed that it is dated and difficult to maintain, and a more modern approach should be taken.

The group highlighted the fact that many States to not have systems available to convert data into advanced formats, and this could hinder information exchange. Many countries use Excel, or other basic software, in place of a database, and would need time to upgrade their systems. It was agreed that administrations currently using Excel would probably need to start with CSV and, around the table, participants from Brazil, Colombia, Mauritania, Nicaragua, Southeast Asia (SEAFDEC), and Uruguay confirmed that they use Excel files. It was clarified that a standard CSV structure for the Global Record would have to be defined, and this could result in the need for modifications to the structure of the existing Excel files.

However, it was also recommended to aim for using XML in the long run, as a better system for data exchange. It was generally agreed that having two formats, namely CSV and XML, would be sufficient. XML would be the preferred option, if resources allowed; otherwise, CSV would be reverted to. Some experts highlighted the need for technical specifications to be issued by the Global Record team, for each of the formats.

It was noted that FAO would need to organise capacity-development to facilitate the upgrade to XML, and experts agreed that it would be useful for information to be collected about the various national systems, to draw conclusions on the most appropriate format in each case.

Discussion opened on the option of considering UN/CEFACT XML schemas, rather than XML in general, especially in the case of investment being made for the generation of files for submission to the Global Record. This would avoid developing a schema specific to the Global Record, and having to agree on the structural details of the format. International standards like UN/CEFACT, which can be customised in its application according to specific data requirements, allow avoiding duplicate work and repeated discussions on details of fields and how to encode them. The UN/CEFACT makes a catalogue

of standard elements available for reuse, even in cross-domain situations, such as customs. In addition to the UN/CEFACT standard for vessels, there is another for licences, authorisations and permits being developed, and there may be the need for other information modules, for example for inspection and surveillance. A further important benefit of UN/CEFACT is that any expert or group can participate in the improvement of the standard by proposing new schemas for the benefit of the entire community. The importance of acknowledging the various exchanges of such information taking place worldwide was also mentioned.

In the EU, the exchange of vessel information, amongst other information, has already been standardised through UN/CEFACT. Experts were informed that, according to Article 10 of the 2013 WTO Trade Facilitation Agreement, the use of international standards was to be promoted worldwide. Therefore, it was agreed that UN/CEFACT XML, where available, would be preferred and that an implementation document would also have to be prepared, which would specify the details concerning only those fields of interest to the Global Record.

A question was raised about the availability of middle-ware or libraries produced by UN/CEFACT to facilitate the use of the standardised XML schemas. Whereas UN/CEFACT does not provide software or libraries, an expert from DG MARE noted that the EU makes software available for the transmission of the XML files, as is mentioned in the Data Transmission Mechanisms section.

4.2. DATA TRANSMISSION MECHANISMS

Regarding modalities for transmission of files, the following options were introduced, explained and put forward for discussion, with the clarification that agreement should be sought on a couple only:

1. Manual:
   - E-mail with a file attachment
   - Upload through a website
2. System-to-system automated exchange mechanisms:
   - Web APIs
   - FLUX (Fisheries Language for Universal eXchange) transportation layer

4.2.1. Manual

The GFCM expert reported that their member countries have different IT skills, so initially they opted for e-mail, with CSV or XML as an attachment, and then upgraded to an extranet accessible by contracting party administrations to upload encrypted CSV files, and modify entries. At a particular point, the GFCM processes and validates the data, and sends confirmation messages or error reports.

The Global Record Secretariat clarified that, in the case of uploads, it would be necessary to consider a system of receipts confirming whether the uploaded file was received and processed, whether there were errors, and so on. In the case of emails, an automated process to unpackage attachments would be put in place, with any error message returned automatically as well. Detailed operational rules would be discussed at a later stage, the importance of which was emphasised by the group.

For file uploads, the group considered the authorisation and authentication of those entitled to upload information, as the system would need to manage credentials and, thus, there could an extra burden on the Global Record Secretariat. The nomination of a technical focal point to deal with information exchange was suggested, and experts were informed that the GFCM has national focal points, nominated by the concerned Government. The importance of clarifying the procedure that State administrations would need to follow, in support of the manual information exchange, was highlighted, such as the nomination and responsibilities of focal points and how to ensure that history with regard to access to the system and data submission are visible.

The issue of security related to data transmission through emails, in particular email attachments, was brought up. Emails would have to be signed and validated as coming from a trusted source, and attachments encrypted in a way that eliminates the risk of viruses and malware. Although various options exist, implementation may not be straightforward and the pros and cons would need to be evaluated. FLUX and web services using WSDL already make provisions for security, whereas file uploading runs security risks similar to those of emails, although reduced. The potential, additional function that an upload system could provide in piloting XML files was mentioned, as a test upload system could be put in place for users to validate their XML files and log the history of error messages.

Various experts commented on their preference for sending information by email, and this modality is currently in use by many, sometimes also for confidential information. Whereas sending emails if simple and easy, experts recognised that more advanced formats, such as XML, would require different mechanisms and file uploads would be better with regards to security. Considering the decisions taken for the CLAV to use email and then upgrade to uploading, both of which encountered problems, it was suggested by the developer of the CLAV to focus on automated systems that remain valid in the long term.

It was agreed that, although it is clear that a manual mode of transmission needs to be made available, there is a need to discuss security and procedural details before deciding on upload over email. Therefore, it was decided that the Global Record team would provide some proposals and the evaluation would continue through the virtual groups.

It was also noted that, should any temporary options be considered, a clear roadmap detailing the phase-out would be necessary. The importance of regional organisations in the coordination and harmonisation of procedures was also reiterated.

4.2.2. Automated

Participants were given an overview of the FLUX transportation layer and were informed that the EU was using this data exchange mechanism, which has a clear distinction between content and technical data that facilitates transmission, meaning that it is a business-agnostic protocol. Although designed for use with UN/CEFACT XML files, CSV or XML files could also be sent in the same manner.

Apart from the main transportation layer to exchange data, DG MARE is also developing software for receiving, generating and unpackaging data according to the UN/CEFACT standards. They are also developing business rules to verify data, which can also be exchanged so that the quality is improved.

The Danish experience with the FLUX transport layer was shared, indicating that it was open source, hence free for anyone to install, but currently installation is difficult, although the setup package includes all necessary components to avoid licensing issues. Apart from improved documentation, the EU is working on a set of automated installation tools, thus doing away with the need for a technician to install it. The FLUX transportation layer is quite easy to learn to use and is supported by a community-based approach to maintenance. It has proved quite stable as a technical platform, already functional in third-parties to the EU, and being used on a daily basis in Denmark with no errors. Web APIs, on the other hand, would still need to be built, tested and implemented.

The provision of virtualised systems was suggested, so the software could be deployed and any problems related to the environment or configuration would be avoided. This would encourage collaboration and allow for better user support. It was agreed that this would be discussed internally at DG MARE.

Questions were raised about different versions of the FLUX transportation layer and, specifically, how it is envisaged to deal with updating without disturbing operations. In response, the need to avoid

systems which are not backward-compatible was highlighted. Each time a new version is made available, the reason for the new version should be communicated, followed by a discussion on pros and cons and the deployment procedure. It was recommended that both versions be maintained simultaneously for a period of time, with nodes being encouraged to update at their earliest convenience. Willingness to follow the upgrade to new versions is imperative, as is the establishment of a service level agreement. This requires different levels depending on whether a node is sending and receiving only, or also forwarding information from and to other nodes. The group agreed that these details should not be underestimated and need to be better studied, including the technical details of the first version to be used, and the time and effort it takes to change versions.

Considering that countries have different levels of infrastructure, there was a query about the minimum requirements for the use of the FLUX transportation layer. It was clarified that, with regard to the network, an administration making use of the FLUX transportation layer would only be an endpoint, with definition of a URL being sufficient to begin the transfer. Moreover, the data structures to be transmitted to the Global Record are comparatively small and, even with a large number of records, there should be no problem of bandwidth.

The potential benefit of using the FLUX transport layer for the Global Record was emphasised, in that, although it presents some challenges, it simplifies data transmission and would facilitate information exchange in different contexts too as it is designed to be globalised, with the focus remaining on standardisation. However, its use will be considered a provisional recommendation until it is published as open source and it is clear that there are no issues of copyright and so on.

It was suggested that DG MARE share the requirements, a manual, or any other information that would allow a decision to be taken with respect to the application of the FLUX transportation layer to the Global Record, as soon as they are made publicly accessible and are protected by a licence. The expert from Uruguay noted his interest, and suggested that a restricted group of States test the software before its implementation as part of the Global Record.

4.3. CAPACITY DEVELOPMENT

The group was reminded that a few countries still have paper-based systems and there is a strong need to upgrade in order to allow for information exchange, possibly using the regional systems as a channel to communicate with the Global Record.

An enquiry was made as to whether the EU has a support programme, with regards to the technologies they are promoting, or a platform to facilitate viewpoints or skill transfer. An expert from DG MARE replied that it was important to have a community for maintenance and discussion and the idea is to create a dedicated open-source community for FLUX, and particularly the transportation layer. It was clear that this environment had to be set up, although first they had to clear all legal aspects.

The SEAFDEC participant noted that information exchange is very important for monitoring and management, and enquired whether one or two experts could be invited to South-East Asia, to share their experiences and to explain the advantages of these systems to his colleagues. The Global Record Secretariat took note, agreeing that different regions were in fact looking for experts to share their experiences and observing that the programme should receive more support and dedicated funds for capacity-development, with confirmation of the utility of the Global Record system. The group was reminded that, for the Global Record, the next milestone is COFI, and technical discussions will continue with the goal of having a functional pilot in the near future. Discussions could continue through the virtual workspace, and the Secretariat is looking forward to continue studying technical issues with IT colleagues of countries. It was noted that the GRCG-DE is not a closed group, and that the Secretariat encourages the invitation of further experts in this domain.

5. CONCLUSION

The meeting ended with thanks to the working groups for their advice and for allowing work on the Global Record to advance. The Secretariat was praised for its hard work on the subject and for the assistance with the three-day meeting.

APPENDIX A

INVITATION TO THE MEETING OF THE GLOBAL RECORD SPECIALISED CORE WORKING GROUPS ON DATA REQUIREMENTS, DATA EXCHANGE AND THIRD PARTY DATA

FAO Headquarters, Rome, Italy
30 September – 2 October 2015

Following the recommendations of the first Meeting of the Global Record Informal Open-Ended Technical and Advisory Working Group (GRWG), held in Rome on 23-25 February 2015, the GRWG Secretariat has established a number of Specialised Core Working Groups to deal with particular matters mainly at technical level. Experts have been nominated to participate in Specialised Core Working Groups on Data Requirements (GRCG-DR), Data Exchange (GRCG-DE) and Third Party Data (GRCG-DE), and work is currently underway through virtual workspaces.

A meeting of each of the Specialised Core Working Groups will be held at FAO headquarters from 30 September to 2 October 2015. The meeting will be informal and will serve as a forum to discuss outstanding issues and reach agreement on recommendations to be put forward to the next meeting of the GRWG for endorsement, to facilitate the continued development of the Global Record information system.

Understanding the importance of ensuring sufficient regional representation, as well as the participation of developed and developing countries in each Core Group, and the interest shown in support of the Global Record, the Secretariat invites your administration to nominate national experts who could contribute technically[3] in their personal capacity in the discussions prior to the meeting, and during the meeting itself. Kindly submit your nomination by COB Thursday 17th September 2015 in order to allow sufficient time for administrative preparations. Participation through web conferencing will also be possible for those not able to travel on the indicated dates.

The meeting will be held in English only and the Secretariat will act as facilitator, as necessary.

A provisional agenda for the meeting can be found in Annex 2. All documents being made available to the members of the Core Working Groups through the virtual workspaces, will serve as the basis for discussion. In order to minimize the environmental impact of FAO's processes and to contribute to climate neutrality, participants are kindly requested to bring copies of the latest version of each of these documents to the meeting and to refrain from asking for additional copies.

Further information can be obtained from FI-Global-Record@fao.org.

[3] according to the Terms of Reference and Expert Profiles in Annex 1.

ANNEX 1

GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON DATA REQUIREMENTS (GRCG-DR)

TERMS OF REFERENCE AND EXPERT PROFILE

Terms of Reference

In order to obtain guidance on outstanding issues in relation to the content of the Global Record information system, the Data Requirements Specialised Core Working Group has been established to discuss and take decisions on the following issues:

- The information modules which will be included in the Global Record, and the data fields they contain;
- The priority of the data fields (low priority/high priority/essential) and the minimum requirements for including a vessel's details in the Global Record;
- Any particular requirements for refrigerated transport vessels and supply vessels;
- The reference lists which will be used in the case of data fields with restricted values;
- Data definitions for all data fields;
- Validation rules to be applied to the data;
- The possible confidentiality or sensitivity of certain information modules or data fields;
- The data providers that carry the responsibility for submitting the data for the various information modules, whether they are member States or other designated organisations, and the frequency with which the data should be submitted;
- The procedure to deal with possible inconsistencies in data received from different data providers;
- Other relevant issues.

Expert Profile

The experts participating in the Data Requirements Specialised Core Working Group should have a professional profile which includes any of the following criteria:

- Experience in the design and/or management of a national, regional or global record or register of vessels engaged in fishing or fishing related activities (hereinafter referred to as "fishing vessels") and/or their authorisations;
- Knowledge of national legislation and regional arrangements related to management of information associated with fishing vessels;
- Experience in the data requirements related to submitting or collecting information associated with fishing vessels, at an international level;
- Familiarity with Monitoring, Control and Surveillance (MCS) systems or mechanisms to fight Illegal, Unreported and Unregulated (IUU), and their information requirements.

GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON DATA EXCHANGE (GRCG-DE)

TERMS OF REFERENCE AND EXPERT PROFILE

Terms of Reference

In order to obtain guidance on outstanding issues in relation to the exchange of data in the context of the Global Record information system, the Data Exchange Specialised Core Working Group has been established to discuss and take decisions on the following issues:

- The definition of mechanisms for data exchange by which data is to be submitted to the Global Record;
- The definition of data standards detailing the formats in which information is to be submitted to the Global Record;
- The definition of operational rules governing data submission including, interalia, factors such as submission receipts, recording of historical information and quality control;
- The identification of necessary tools and capacity development required for data providers to make use of the specified data standards and data exchange mechanisms, and comply with the validation and operational rules;
- Other relevant issues.

Expert Profile

The experts participating in the Data Exchange Specialised Core Working Group should have a professional profile which includes any of the following criteria:

- Experience in the design and/or development of automated systems for exchange of information related to vessels engaged in fishing or fishing related activities (hereinafter referred to as “fishing vessels”), at a national, regional or global level;
- Knowledge of information systems related to management of information associated with fishing vessels, and the exchange of such information;
- Familiarity with the requirements related to submitting or collecting information associated with fishing vessels, at an international level.

GLOBAL RECORD SPECIALISED CORE WORKING GROUP ON THIRD PARTY DATA (GRCG-TP)

TERMS OF REFERENCE AND EXPERT PROFILE

Terms of Reference

In order to obtain guidance on outstanding issues on the inclusion of third party data[4] in the Global Record information system, the Third Party Data Specialised Core Working Group has been established to discuss and make recommendations on the following issues:

- The identification of third parties which may act as a source of information for the Global Record;
- The definition of the role that each third party could play, and the way in which the data may be utilised in the context of the Global Record information system, whether directly incorporated in the system, linked to externally, used for quality control or any other purpose;
- The acceptable terms and conditions governing agreements between FAO and third parties for the use of their data;
- Other relevant issues.

Expert Profile

The experts participating in the Third Party Data Specialised Core Working Group should have a professional profile which includes any of the following criteria:

- Knowledge of entities and information systems which provide information associated with fishing vessels;
- Understanding of the legal framework governing the ownership and use of information related to vessels engaged in fishing or fishing related activities (hereinafter referred to as "fishing vessels"), at a national, regional or global level;
- Familiarity with existing agreements that allow the sharing of information associated with fishing vessels, at an international level.

[4] Third party data refers to data provided by entities other than FAO Members.

ANNEX 2

PROVISIONAL AGENDA*

Wednesday 30 September 2015
Specialised Core Working Group on Data Requirements (GRCG-DR)

1. Opening of the Meeting
2. Vessel Dimensions
   - Details of freezer vessels
3. Vessel Ownership
   - IMO Company Number
   - Contact information
4. Historical Details
   - Submission versus generation
5. Compliance
   - Inclusion of good compliance
   - Options for data requirements of Compliance information module
   - Infringement/Apparent Infringement Reference
6. Drafting of Recommendations to the GRWG

Thursday 1 October 2015
Specialised Core Working Group on Third Party Data (GRCG-TP)

1. Opening of the Meeting
2. IHS Maritime & Trade
3. EQUASIS
4. GISIS (IMO)
5. RFMO IUU Lists
6. Other Third Party Data
7. Drafting of Recommendations to the GRWG

Friday 2 October 2015
Specialised Core Working Group on Data Exchange (GRCG-DE)

1. Opening of the Meeting
2. Data Format Standards
3. Data Transmission Mechanisms
4. Proposed Solutions
5. Drafting of Recommendations to the GRWG

*Note: The meeting will start at 9 a.m. on Wednesday, 30 September 2015. Irrespective of progress made on 30 September – 1 October, the Specialized Core Working Group on Data Exchange (GRCG-DE) should start work at 9 a.m. on Friday 1 October 2015

APPENDIX B

CONCLUSIONS, CONFIRMATIONS AND PENDING ITEMS

GRCG-DR

Conclusions:

- Vessel details:
  - MMSI inclusion level: Low Priority
  - New data fields: AIS Indicator – Low Priority
    AIS Details – Low Priority
  - Current Flag State Registration Date inclusion level: High Priority
  - New data field: Name in English – Low Priority
  - Operational Status to change from proposed reference list to Active/Inactive
  - Year and Country of Construction inclusion level: Low Priority
  - New data fields: Owner IMO Company Number – Low Priority
    Operator/Manager IMO Company Number – Low Priority
    Beneficial Owner IMO Company Number – Low Priority
  - Owner Address, Operator/Manager Address and Beneficial Owner Address inclusion level: High Priority
  - Owner Nationality, Operator/Manager Nationality and Beneficial Owner Nationality to be removed from Vessel details
  - All details related to Master and Fishing Master to be removed from Vessel details
  - Main Gear to be removed from Vessel details
  - Picture Type to be removed from Vessel details
- Historical details:
  - New data fields: Previous Operator/Manager Name – High Priority
    Operator/Manager Change Date – High Priority
- Authorisation details:
  - Multiple instances of Authorised Area, Species and Gear will be allowed
- Inspection and Surveillance:
  - Compliance details to be renamed to Inspection and Surveillance and all reference to ‘compliance’ removed from definitions
  - Option 1 (from Appendix 2 of the Global Record Strategy Document) to be used
  - Source to be renamed to Report Type
  - New field: Authority Role – Reference List
    (Flag State/Port State/Coastal State/RFMO Inspection Scheme)
  - Option 2 (based on Serious Violations in UN Fish Stocks Agreement) to be used for Infringement/Apparent Infringement reference list
  - Infringement/Apparent Infringement reference list ‘Other’ option to be changed to ‘Other, report infringement in Details field’
  - Infringement/Apparent Infringement reference list to include ‘None’ as an option
  - Infringement Outcome inclusion level: High Priority
  - Infringement Outcome reference list ‘Other’ option to be changed to ‘Other, report outcome in Details field’
  - Infringement Outcome reference list to include ‘No sanction, report reason in Details field’ as an option

  - ‘Criminal sanction’ to be removed from Infringement Outcome reference list
  - New field: Outcome Details – Low Priority

- Port Entry Denials:
  - Port of Call to be renamed to Port
  - Option 2 (States notifying Ports) to be used for Port reference list (Vessel details too)

- IUU Lists:
  - New field: Listing Link – URI – High Priority

Confirmations:

- Vessel details:
  - UVI is pre-requisite for entering information into the Global Record
  - Only Essential fields are strictly required to enter information into the Global Record
  - Essential fields: UVI, Current Flag State, Vessel Name, LOA, GT (GRT is acceptable in its absence)
  - National Registration Number inclusion level: High Priority
  - Operational Status inclusion level: Low Priority
  - Registered Length inclusion level: Low Priority
  - Power of Main Engine’s and Power Unit inclusion level: High Priority
  - Engine details such as Manufacturer and Serial Number not to be included in Vessel details
  - Type of Fishing Operation (proposed by GRCG-DR participant) not to be included in Vessel details
  - Picture inclusion level: Low Priority

- Historical details:
  - All fields inclusion level: High Priority (if applicable)

- Authorisation details:
  - Hold Capacity, Number of Days Tide, Mode of Fishing Catch, Inflicted Punishment and Amends Inflicted (proposed by GRCG-DR participant) not to be included in Authorisation details

- Inspection and Surveillance:
  - Also include reports which do not result in Infringement/Apparent Infringement

- Port Entry Denials:
  - Include only reports of denied entries

- IUU Lists:
  - RFMOs to submit information related to listing/delisting of vessel

Pending Items:

- Vessel details:
  - National/regional indicator related to VMS?
  - New field: Fish Hold Capacity – Low Priority?
  - New field: Fish Hold Type? Related reference list?

- Authorisation details:
  - Reason for Revocation data type: Text or Reference List?

- Inspection and Surveillance:
  - New fields for Master and Fishing Master details?

  - Assign severity level/categories/other options to Infringement/Apparent Infringement reference list?
  - Different data providers for Outcome (and therefore separate module)?

- Port Entry Denials:
  - Reason for Denial data type: Text or Reference List?

- Other:
  - Scope (for GRWG): to include rapidly changing information such as Authorizations?
  - Port reference list: procedure by which data providers will report port codes and names?

GRCG-DE

Conclusions:

- The Global Record will accept data in CSV and XML format (UN/CEFACT XML where applicable), with XML being the preferred option
- Detailed technical specifications must be provided for each of the formats
- Capacity development to facilitate the upgrade to XML needs to be organised
- Both manual and automated transmission mechanisms need to be made available
- Information about the various national systems in place would be collected, in order to understand what support should be offered

Confirmations:

- A limited number of formats and transmission mechanisms, which cover the different capacities of data providers, must be decided upon
- Capacity development is key to ensuring data exchange

Pending Items:

- What security systems could be put in place to protect emails, especially attachments?
- What would the procedural details of sending data by email, or uploading to a website, be?
- Email or upload for manual transmission?
- Recommendation of use of FLUX over web services, pending sharing of technical documentation by DG MARE and study of details of FLUX, and clearing of licencing issues

GRCG-TP

Conclusions:

- Indication of whether Vessel has been issued with an INTERPOL purple notice is important
- Link to INTERPOL in order to show full details of purple notice
- Indication of whether Vessel has been listed on any RFMO IUU List is important
- RFMOs to report listing/delisting to Global Record
- Link to RFMO websites in order to show full details of IUU listing
- Maintain history of IUU listing/delisting in Global Record

Confirmations:

- Official data providers are States, which are responsible and accountable for the info submitted
- Flag State endorsement is necessary should any third party Vessel data be included in the Global Record, or any entity be submitting data on their behalf (eg: RFMO)
- Source of data must always be indicated in the Global Record

- Essential info for Vessel must always be submitted to the Global Record in order to link to third party systems for complementary information
- Information from States will be directly submitted to the Global Record and not linked to

Pending Items:

- Use of IHS-M Vessel info in the interim? If yes, directly incorporated in GR or through link to SeaWeb?
- Use of IHS-M Historical info? If yes, as interim measure or permanently? Directly incorporated in GR or through link to SeaWeb?
- Use of any IHS-M info for cross-checking against State info? If so, what will the procedure be?
- How to deal with conflicting information submitted?
- Will a user feedback mechanism be put into place? If so, what will the procedure and responsibilities be?
- Will the Global Record be used as a central repository of data, to forward to RFMOs or others?
- Useful to link to EQUASIS?
- Useful to link to GISIS? Possible to link to GISIS?

APPENDIX C

LIST OF PARTICIPANTS

Mr Sidi Mohammed CHEIKH
Technical Adviser of Minister
Ministry of Fisheries and Maritime Economy
of Mauritania
E-mail: sidmcheikh@yahoo.fr

Ms Martha Lucia DE LA PAVA
Fisheries Project Coordinator
FAO Colombia
E-mail: martha.delapava@fao.org.co
delapavaml@hotmail.com

Mr Trevor DOWNING
Consultant
World Wide Fund
E-mail: tdowning@tjdconsult.co.uk

Mr Harry KOSTER
Executive Director
International MCS Network
E-mail: hkoster@imcsnet.org

Ms Luisa Fernanda MALDONADO
Asesor Inspección y Vigilancia,
Fishery Authority, AUNAP, Colombia
E-Mail: luisa.maldonado@aunap.gov.co

Mr Felipe Weber MENDONÇA SANTOS
Advisor/Aquaculture Engineer
Ministry of Fisheries and Aquaculture,
Brazil
E-mail: felipe.mendonca@npa.gov.br
felipe.w.m@gmail.com

Mr Diego NUÑEZ GLUTZ
Fisheries Information Area Manager
DINARA
Uruguay
E-mail: dnunez@dinara.gub.uy
dglutz@gmail.com

Mr Carlos OSSORIO
Fisheries Inspector
Subdirección General de Control e Inspección
Secretaría General de Pesca
Ministerio de Agricultura, Alimentación y
Medio Ambiente (MAGRAMA) - España
E-mail: cossorio@magrama.es

Ms Nora PALACIO
Analista Estadistica
INPESCA/OSPESCA
Nicaragua
E-mail: npalacios@inpesca.gob.ni
npalacios6@hotmail.com

Ms Michelle PARKER
Senior Product Manager
IHS-Maritime & Trade
E-mail: michelle.parker@ihs.com

Mr Thierry REMY
Project/Process Manager
EC DG MARE – Integrated Fisheries Data
Management Unit
E-mail: thierry.remy@ec.europa.eu

Mr Sisiraksophon SOMBOON
Policy and Program Coordinator
SEAFDEC
E-mail: somboon@seafdec.org

Mr Giuseppe SPERA
Policy Officer
EC DG MARE – Fisheries Policy and
Aquaculture Unit
E-mail: giuseppe.spera@ec.europa.eu

Mr Michele SURACE
Policy Officer
EC DG MARE – Integrated Fisheries Data
Management Unit
E-mail: michele.surace@ec.europa.eu

Mr Gert THOSTRUP
Senior Adviser
Danish AGRIFISH Agency
E-mail: gkt@naturerhverv.dk

Participants through Audio-conference

Mr Eric HONORÉ
Programme & EU Fisheries Policies Officer - UN/CEFACT Expert
EC DG MARE – Integrated Fisheries Data Management Unit
E-mail: eric.honore@ec.europa.eu

Ms Marta LÓPEZ GÓMEZ
Jefa de Sección Técnica
Subdirección General de Control e Inspección
Secretaría General de Pesca
Ministerio de Agricultura, Alimentación y Medio Ambiente (MAGRAMA) - España
E-mail: mlopezg@magrama.es

Mr José LORENZO
Subdirección General de Control e Inspección
Secretaría General de Pesca
Ministerio de Agricultura, Alimentación y Medio Ambiente (MAGRAMA) - España
E-mail: jmlorenzo@magrama.es

Mr Frank MEERE
Senior Advisor
Ending Illegal Fishing Project
The Pew Charitable Trusts
E-mail: fmeere@aapt.net.au
Tel: +61 2 6291 7690

Ms Isabel PARRA
Jefe de Área de Gestión Actividad Pesquera/
Subdirección General de Control e Inspección
Ministerio de Agricultura, Alimentación y Medio Ambiente (MAGRAMA) - España
E-mail: iparrasa@magrama.es

Mr David PEARL
Position: NOAA Counter-IUU Fishing Coordinator
US Coast Guard and NOAA
E-mail: david.pearl@noaa.gov

Mr Tim SHOEMAKER
Branch Chief
US Coast Guard
E-mail: tim.c.shoemaker@uscg.mil

MR LUKE SLIVINSKI
Lieutenant Commander
US Coast Guard Liaison to DOS OES/OMC & NOAA
E-mail: slivinskilm@state.gov

Ms Ashlee WILLIAMS
Director, Data Operations
IHS Maritime & Trade
E-mail: ashlee.williams@ihs.com

Ms Natalie WILLIAMS
Product Manager
IHS Maritime & Trade
E-mail: natalie.williams@ihs.com

FAO

Ms Dawn BORG COSTANZI
Global Record Systems Analyst /Developer
Fishing Operations and Technology Branch (FIRO)
E-mail: dawn.borgcostanzi@fao.org

Mr Fabio FIORELLATO
Fishery Systems Developer,
Statistics and Information Branch (FIPS)
E-mail: fabio.fiorellato@fao.org

Mr Ari GUDMUNDSSON
Officer-in-Charge,
Fishing Operations and Technology Branch (FIRO)
E-mail: ari.gudmundsson@fao.org

Mr Blaise KUEMLANGAN
Chief
Development Law Service
E-mail: blaise.kuemlangan@fao.org

Mr Pio MANOA
Legal Officer
Development Law Service (LEGN)
E-mail: pio.manoa@fao.org

Ms Alicia MOSTEIRO CABANELAS
Global Record Technical Manager/ MCS Operations Specialist
Fishing Operations and Technology Branch (FIRO)
E-mail: alicia.mosteiro@fao.org

Ms Marina RAÏS
Global Record Programme Operations Specialist
Fishing Operations and Technology Branch (FIRO)
E-mail: marina.rais@fao.org

Mr Jiaxi WANG
Junior Professional Officer
Fishing Operations and Technology Branch (FIRO)
E-mail: jiaxi.wang@fao.org

GFCM/FAO

Mr Federico DE ROSSI
Fishery Officer (Data Compliance)
GFCM/FAO (FIDG)
E-mail: federico.derossi@fao.org

Mr Roberto EMMA
Systems Analyst
GFCM/FAO (FIDG)
E-mail: roberto.emma@fao.org

Mr Nicola FERRI
Fishery Officer (Institutional and Legal)
GFCM/FAO (FIDG)
E-mail: nicola.ferri@fao.org

APPENDIX D

GRCG-DR/2015/03: DATA REQUIREMENTS FOR THE GLOBAL RECORD

INFORMATION MODULES

Vessel Details

Section	Data Field	Inclusion Level[5]	Data Type	Definition
Identification	Unique Vessel Identifier (UVI)/ IMO Number	Essential	Number	The unique number that is assigned to the vessel as a unique and permanent identifier.
	External Marking	Low Priority	Text	The markings on the hull of the vessel. (Marking of fishing vessels for identification should be in accordance with uniform and internationally recognisable vessel-marking systems, such as the FAO standard specifications for marking and identification of fishing vessels.)
	International Radio Call Sign (IRCS)	High Priority	Text	The International Radio Call Sign of the vessel.
	Maritime Mobile Service Identity (MMSI)	High Priority	Text	The number used by maritime digital selective calling (DSC), automatic identification systems (AIS) and certain other equipment to uniquely identify the vessel.
	VMS Indicator	High Priority	Boolean[6]	An indicator of whether the vessel has a VMS system on board.
	VMS Details	Low Priority	Text	Any additional details related to VMS, including identification numbers.
Regional Identification[7]	Regional Body	High Priority (if applicable)	*Regional Body ID Referen*	The regional body issuing the identifier being reported.
	Regional Body Identifier	High Priority (if applicable)	Text	The identifying codes (alphanumeric combinations) given to the vessel.
Registration	Current Flag State	Essential	*Country Reference*	The country where the vessel is registered.

[5] Essential: minimum requirement for the inclusion of the individual record within the Global Record; High Priority: crucial information for the utility of the Global Record; Low Priority: useful information that should be provided to the Global Record if it is available

[6] Yes or No

[7] Multiple instances allowed

	Current Flag State Registration Date	Low Priority	Date	The date of registration of the vessel within the flag state register.
	National Registration Number	High Priority	Text	The registration number given by the flag state.
	Vessel Name	Essential	Text	The full vessel name.
	Registration Port	High Priority	*Port Reference*	The port (or place) of registry as recorded on the ship's papers.
	Vessel Type	High Priority	*Vessel Type Reference*	The type of the vessel, according to the ISSCFV list.
	Operational Status	Low Priority	*Operational Status* Reference	An indication of whether the vessel is in operation or otherwise.
Dimensions	Length Overall (LOA)(m)	Essential	Number	The distance, in a straight line parallel to the design waterline between the foremost point of the bow and the aftermost point of the stern of a vessel outside of the main hull. If the vessel has a bulbous bow, this is also included in this measurement.
	Length Between Perpendiculars (LBP) (m)	Low Priority	Number	The length of the vessel, measured from the intersection of the stem and the design waterline and the centreline of the rudder stock of that waterline.
	Registered Length (m)	Low Priority	Number	For any vessel built after 18 July 1982, 96 percent of the total length on a waterline at 85 percent of the least moulded depth measured from the top of the keel, or the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In ships designed with a rake of keel the waterline on which this length is measured shall be parallel to the designed waterline; For any vessel built before 18 July 1982, registered length as entered on the national register or other record of vessels.
	Beam/Extreme Breadth (m)	Low Priority	Number	The width at the widest point measured at the outside of the ship's structure.
	Moulded Depth (m)	Low Priority	Number	The vertical distance measured from the keel line to the top of the working deck beam at side, where the keel line is the line parallel to the slope of keel passing amidships through: the top of the keel or line of intersection of the inside of shell plating with the keel where a bar keel extends above that line of a vessel with a metal shell: or

				the rabbet lower line of the keel of a vessel with a shell of wood or a composite vessel; or the intersection of a fair extension of the outside of the shell contour at the bottom with the centreline of a vessel with a shell of material other than wood and metal. In vessels having rounded gunwales, the moulded depth shall be measured to the point of intersection of the moulded lines of the deck and side shell plating, the lines extending as though the gunwale were of angular design. Where the working deck is stepped and the raised part of the deck extends over the point at which the moulded depth is to be determined, the moulded depth shall be measured to a line of reference extending from the lower part of the deck along a line parallel with the raised part. (The working deck is generally the lowest complete deck above the deepest operating waterline).
	Draught (m)	Low Priority	Number	The vertical distance between the waterline and the bottom of the hull (keel) of the vessel, with the thickness of the hull included.
	Deadweight[8]	High Priority	Number	The actual amount of weight in tonnes that a vessel can carry when loaded to the maximum permissible draught (includes fuel, fresh water, gear supplies, cargo/catch and crew).
	Net Tonnage (NT)[8]	High Priority	Number	A vessel's earning space and is a function of the moulded volume of all cargo spaces of the vessel. NT is determined according to the provisions of the International Convention on Tonnage Measurement of Ships, 1969 (1969 Convention).
	Net Registered Tonnage (NRT)[8]	High Priority	Number	The volume of cargo the vessel can carry. NRT is pre 1969 Convention net tonnage measurement, as provided by the reporting (source) Administrations.
	Gross Tonnage (GT)	Essential[9]	Number	A function of the volume of all ship's enclosed spaces (from keel to funnel) measured to the outside of the hull framing. GT is measured according to the provisions of the International Convention on Tonnage Measurement of Ships, 1969 (1969 Convention).
	Gross Registered Tonnage (GRT)	Essential[9]	Number	The total internal volume of a vessel, where a register ton is equal to a volume of 100 cubic feet (2.83 m^3). GRT is pre 1969 Convention gross

[8] Only refrigerated transport and supply vessels
[9] Only one of GT or GRT is Essential

				tonnage measurement, as provided by the reporting (source) Administrations.
	Power of Main Engine/s	High Priority	Number	The power of the main engine or the sum of the power of the main engines.
	Power Unit	High Priority	*Power Unit Reference*	The unit of measurement of the power.
	Hull Material	High Priority	*Hull Material Reference*	The material with which the vessel hull is constructed, from the following list.
Construction	Year of construction	High Priority	Number	The year when the vessel was manufactured.
	Country of construction	High Priority	*Country Reference*	The country where the vessel was manufactured,
Ownership	Owner Name	High Priority	Text	The legal title of ownership of the vessel that appears on the ship's registration documents.
	Owner Address	Low Priority	Text	The address of the owner, including Address, City, Postcode and Country.
	Owner Nationality	High Priority	*Country Reference*	The country of nationality of the owner.
	Operator/Manager Name	High Priority	Text	The individual or company responsible for the commercial decisions concerning the employment of a ship and therefore who decides how and where that asset is employed.
	Operator/Manager Address	Low Priority	Text	The address of the operator/manager, including Address, City, Postcode and Country.
	Operator/Manager Nationality	Low Priority	*Country Reference*	The country of nationality of the operator/manager.
	Beneficial Owner Name	High Priority	Text	The controlling interest behind the vessel and the ultimate beneficiary from the ownership.
	Beneficial Owner Address	Low Priority	Text	The address of the beneficial owner, including Address, City, Postcode and Country.
	Beneficial Owner Nationality	High Priority	*Country Reference*	The country of nationality of the beneficial owner
	Master Name	Low Priority	Text	The licensed mariner in ultimate command of the vessel and responsible for its safe and efficient operation.
	Master Address	Low Priority	Text	The address of the master, including Address, City, Postcode, Country
	Master Nationality	Low Priority	*Country Reference*	The country of nationality of the master

	Fishing Master Name	Low Priority	Text	The person responsible for the fishing operations of the vessel.
	Fishing Master Address	Low Priority	Text	The address of the fishing master, including Address, City, Postcode, Country
	Fishing Master Nationality	Low Priority	*Country Reference*	The country of nationality of the fishing master
Gears	Main Gear	High Priority	*Gear Type Reference*	The precise/specific gear type of the main gear authorised to be used, according to the ISSCFG list.
Picture	Picture	Low Priority	File	The picture of the vessel.
	Picture Link	Low Priority	URI	The link to an online location where a picture of the vessel is available.
	Picture Type	Low Priority	*Picture Type Reference*	The type of picture.
	Picture Details	Low Priority	Text	Any additional comment related to the picture, such as when it was taken and where.

Historical Details

Section	Data Field	Inclusion Level	Data Type	Definition
Flag[10]	Previous Flag State	High Priority (if applicable)	*Country Reference*	The country where the vessel was previously registered.
	Deregistration Date	High Priority (if applicable)	Date	The effective date of deregistration of the vessel from this register.
Name[10]	Previous Name	High Priority (if applicable)	Text	The previous name of the vessel.
	Name Change Date	High Priority (if applicable)	Date	The effective date in which this vessel name was changed.
Owner[10]	Previous Owner Name	High Priority (if applicable)	Text	The full name of the previous owner of the vessel.
	Owner Change Date	High Priority (if applicable)	Date	The effective date in which this owner was changed.

[10] Multiple instances allowed

Authorization Details

Data Field	Inclusion Level	Data Type	Definition
Authorisation Type	High Priority	Text	The type of authorisation given by the relevant State or Regional Fisheries Management Organization, specifying whether it is an authorisation to fish, to transship, to supply or other.
Authorisation Number	High Priority	Text	The authorisation number given by the relevant State or Regional Fisheries Management Organization.
Authorisation Holder	Low Priority	*Authorization Holder Reference*	The holder of the authorisation.
Issued By	High Priority	Text	The authority issuing the document allowing the activity.
Issued Date	High Priority	Date	The effective date in which the authorisation was issued by the relevant authority.
Authorisation Period Start Date	High Priority	Date	The effective date in which the authorisation becomes active (or enters into force).
Authorisation Period End Date	High Priority	Date	The effective date in which the authorisation becomes inactive (or expires).
Authorised Area	High Priority (if applicable)	*Area Reference*	The geographic area to which the authorisation applies.
Authorised Species	High Priority (if applicable)	*Species Reference*	The species which may be fished or transshipped according to the authorisation.
Authorised Gear	High Priority (if applicable)	*Gear Type Reference*	The fishing gear approved to capture the relevant species within the geographical area indicated in the authorisation.
Date of Revocation	High Priority (if applicable)	Date	The effective date of removal, withdrawal, or cancellation of the specific authorisation.
Reason for Revocation	High Priority (if applicable)	*Authorization Revocation Reference* OR Text	The justification for withdrawing the authorisation previously granted, before the expiry date.

Compliance Details

Option 1: Appendix 2 of the Global Record Strategy Document

Data Field	Inclusion Level	Data Type	Definition
Report Number	High Priority	Text	The number of the inspection or sighting report.
Source	High Priority	*Report Source Reference*	The type of action/activity that generated the relevant compliance report.
Originating State	High Priority	*Country Reference*	The country carrying out the control activity and providing the information through the compliance report.
Issuing Authority	High Priority	Text	The national agency or body carrying out the control activity and generating the compliance report.
Date	High Priority	Date	The effective date in which the report was generated/approved.
Location	High Priority	Text	The place in which the control action was carried out, depending on the type of action undertaken, as relevant (Statistical Area, Latitude/Longitude, or Port).
Infringement/ Apparent Infringement	High Priority	***Error! Not a valid result for table.*** OR Text	The type of action carried out in contravention of a national, regional or international fisheries law, regulation or agreement, which resulted in a formal administrative or criminal procedure.
Details	Low Priority	Text	Any further explanatory details that may support risk assessment, decision making, etc., including comments from the master.
Outcome	Low Priority	*Infringement Outcome Reference*	The action taken by relevant control authorities in response to an infringement, or outcome of the formal procedure.
Contact Details	Low Priority	Text	The contact details of the issuing authority, flag State or vessel for further information.

Option 2: Indication of issues and steps taken

Data Field	Inclusion Level	Data Type	Definition
Report Number	High Priority	Text	The number of the inspection or sighting report.
Source	High Priority	*Report Source Reference*	The type of action/activity that generated the relevant compliance report.
Originating State	High Priority	*Country Reference*	The country carrying out the control activity and providing the information through the compliance report.
Issuing Authority	High Priority	Text	The national agency or body carrying out the control activity and generating the compliance report.
Date	High Priority	Date	The effective date in which the report was generated or approved.
Location	High Priority	Text	The place in which the control action was carried out, depending on the type of action undertaken, as relevant (Statistical Area, Latitude/Longitude, or Port).
Anything amiss?	High Priority	Boolean	An indication of whether anything was found to be amiss during the control action.
Details	High Priority	Text	Any specific details on the relevant information which indicated an issue during the control action.
Issue with Vessel Identification or Marking?	Low Priority	Boolean	An indication of whether there is anything wrong (missing data, falsified data, inconsistent data, etc.) with the information pertinent to vessel identification or marking.
Issue with VMS or AIS?	Low Priority	Boolean	An indication of whether there is anything wrong (missing data, falsified data, inconsistent data, etc.) with the information pertinent to the VMS or AIS systems on board.
Issue with RFMO Status?	Low Priority	Boolean	An indication of whether there is anything wrong (missing data, falsified data, inconsistent data, etc.) with the information pertinent to the status of the vessel within an RFMO.
Issue with Fishing Licence or Authorisations?	Low Priority	Boolean	An indication of whether there is anything wrong (missing data, falsified data, inconsistent data, etc.) with the information pertinent to the fishing licence or authorisation.
Issue with Logbook, Port Entry Request or similar documentation?	Low Priority	Boolean	An indication of whether there is anything wrong (missing data, falsified data, inconsistent data, etc.) with the information pertinent to the logbook, port entry request, or any other relevant documentation.
Issue with Catch, Transshipment, Landing or Catch Retained Declarations?	Low Priority	Boolean	An indication of whether there is anything wrong (missing data, falsified data, inconsistent data, etc.) with the information pertinent to the catch, transshipment and landing declarations/documentation or the catch retained on-board.

Issue with Fishing Gear?	Low Priority	Boolean	An indication of whether there is anything wrong (missing data, falsified data, inconsistent data, etc.) with the information pertinent to the gear used for the fishing activity or stored on board.
Other Issue?	Low Priority	Boolean	An indication of whether there is anything wrong (missing data, falsified data, inconsistent data, etc.) with any other relevant information pertinent to vessel or the fishing or fishing related activity.
Action Taken	Low Priority	*Infringement Outcome Reference*	The action taken by relevant control authorities in response to an infringement or outcome of the formal procedure.
Issue Resolved?	Low Priority	Boolean	An indication of whether the infringement was resolved or not.

Port Entry Denials

Data Field	Inclusion Level	Data Type	Definition
Notification Number	High Priority	Text	The number or identifier of the notification of the port entry denial.
Originating State	High Priority	*Country Reference*	The country denying port entry and issuing the notification.
Port of Call	High Priority	*Port Reference*	The port to which the vessel requested entry and was denied.
Date	High Priority	Date	The effective date in which the notification of port entry denial was issued.
Reason for Denial		Text	The justification for denying port entry.

IUU Lists

Data Field	Inclusion Level	Data Type	Definition
RFMO	High Priority	*RFMO IUU* List Reference	The Regional Fisheries Management Organization IUU or black list in which the vessel is included.
Listing Date	High Priority	Date	The effective date in which the vessel was officially included in the IUU List of that RFMO.
Delisting Date	High Priority	Date	The effective date in which the vessel was removed from the RFMO IUU List (blank if still on the list)

REFERENCE LISTS

Regional Body ID Reference[11]

Code	Description
EUCFR	European Union Community Fleet Register number
GFCM	GFCM Registration Number
FFA	FFA Vessel ID
OSPESCA	SIRPAC Vessel ID
CCAMLR	CCAMLR Vessel ID
IOTC	IOTC Number
ICCAT	ICCAT List Number
IATTC	IATTC Vessel Number
WCPFC	WCPFC Vessel ID
CCSBT	CCSBT Registration Number

Country Reference

ISO-3166 3-alpha Country Code[12] as listed here: https://www.iso.org/obp/ui/#search
(Select 'Country codes' and click on the search symbol: then select 'Officially assigned codes' in the menu on the left side.)

Port Reference

Option 1: UN/LOCODE

UN/LOCODE as listed by Country here:
http://www.unece.org/cefact/locode/service/location.html
(Consider entries where Function = 1, which represents a Port)
The advantage of choosing this option is that the list is already in existence, and is a UN standard; however, it may need refinement.
Option 2: Global Record Port List

A mechanism would be set up by which every State, or data provider, would notify the Global Record of its ports (identifier and name), initially when the system is set up and eventually should any changes take place.

Vessel Type Reference

ISSCFV Standard Abbreviation (known as FAO alpha code)**Error! Bookmark not defined.** as listed here:
ftp://ftp.fao.org/FI/DOCUMENT/cwp/handbook/annex/annexLII.pdf

[11] It is understood that this list is not exhaustive, please add any other regional vessel records you may be aware of.
[12] As specified in Annex D of the Port State Measures Agreement
http://www.fao.org/fileadmin/user_upload/legal/docs/2_037t-e.pdf

Operational Status Reference

Code	Description
1	Active
2	Vessel or Engine Repairs
3	Fishing Gear Repairs
4	Damaged
5	Laid-Up
6	Documents Out of Order
7	Sequestered
8	Abandoned
9	Broken-up / Shipwrecked
10	Change of Activity (not fishing)
98	Other
99	Unknown

Power Unit Reference

Code	Description
KW	Kilowatt
HP	Horse Power
OT	Other

Hull Material Reference

Code	Description
1	Wood
2	Marine Plywood
3	Aluminium
4	Iron/Steel
5	Fibreglass
6	Rubber
7	Cement
98	Other
99	Unknown

Gear Type Reference

ISSCFG Standard Abbreviation (known as FAO alpha code)**Error! Bookmark not defined.** as listed here: ftp://ftp.fao.org/fi/document/cwp/handbook/annex/AnnexM1fishinggear.pdf

Picture Type Reference

Code	Description
1	A picture of the stern of the vessel
2	A picture of the bow of the vessel
3	A picture of the port side of the vessel
4	A picture of the starboard side of the vessel
5	A picture of the bridge of the vessel
6	A picture of the whole vessel
7	A picture of the vessel from air
8	A general picture of the vessel

Authorization Holder Reference

Code	Description
1	Vessel
2	Vessel Owner
3	Vessel Operator/Manager
4	Vessel Master

Authorization Revocation Reference

Code	Description
1	Violation of conditions of authorisation
2	Punishment in force for infringement of the requirements for fishing
3	Accumulation of maximum number of penalty points or committing of serious infringements
4	Fishing opportunities reduced to an extent that does not enable fishing pursuant to authorisation
5	Fishing not allowed by the legislation regulating fishing, or by the state or international organisation regulating fishing in the fishing ground
6	Revocation of fishing licence, or deletion from flag State register, of the vessel indicated in the authorisation
7	Non-use of vessel for stipulated period of time
8	Failure to inform of changes in vessel's ownership and use
9	Failure to comply with data reporting requirements or monitoring of vessel position
10	Failure to ensure presence of observers or inspectors as required
11	Failure to effect payment for fishing rights
12	Quota reached

Area Reference

FAO Fishing Areas at Major Fishing Area, Subarea, Division or Subdivision level[13], as documented here:
http://www.fao.org/fishery/cwp/handbook/h/en

Species Reference

ASFIS 3-alpha code (known as FAO 3-alpha code)**Error! Bookmark not defined.** as available here:
http://www.fao.org/fishery/collection/asfis/en

Report Source Reference

Code	Description
1	Port inspection
2	At-sea inspection
3	Transshipment inspection – receiving vessel
4	Transshipment inspection – donor vessel
5	Vessel sighting

[13] For example, the codes '27' for Northeast Atlantic , '27.9' for Portughese Waters, '27.9.b' for Portughese Waters – West, and '27.9.b.2' for Portughese Waters – West Non-NEAFC Regulatory Area would all be acceptable. Refer to http://www.fao.org/fishery/area/Area27/en.

Infringement/ Apparent Infringement Reference

Option 1: Apparent Infringement Severity Scale Reference

Code	Description
RED	Severe
ORANGE	High
YELLOW	Elevated
BLUE	Moderate
GREEN	Low

Option 2: UN Fish Stocks Agreement Serious Violations Reference14

Code	Description
1	Fishing without a valid licence, authorisation or permit
2	Failing to maintain accurate records of catch and catch-related data or serious misreporting of catch
3	Fishing in a closed area, fishing during a closed season or fishing without, or after attainment of, a quota
4	Directed fishing for a stock which is subject to a moratorium or for which fishing is prohibited
5	Using prohibited fishing gear
6	Falsifying or concealing the markings, identity or registration of a fishing vessel
7	Concealing, tampering with or disposing of evidence relating to an investigation
8	Multiple violations which together constitute a serious disregard of conservation and management measures
98	Other

Infringement Outcome Reference

Code	Description
1	Warning
2	Addition/deduction of penalty points
3	Monetary penalty
4	Temporary or permanent confiscation of catches, gear, equipment and vessel
5	Restriction, suspension or revocation of a fishing authorisation/licence
6	Temporary or permanent ineligibility to hold or apply for a fishing authorisation/licence
7	Loss of fishing quota
8	Repayment of financial aid
9	Temporary or permanent ban on access to public assistance, subsidies or financial aid
10	Vessel under investigation
11	Criminal sanction
98	Other

[14] As specified in Paragraph 11 of Article 21 of the UN Fish Sticks Agreement: http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf.

RFMO IUU List Reference

Code	Description
CCAMLR-C	Commission for the Conservation of Antarctic Marine Living Resources Contracting Party IUU Vessel List
CCAMLR-NC	Commission for the Conservation of Antarctic Marine Living Resources Non-Contracting Party IUU Vessel List
IATTC	Inter-American Tropical Tuna Commission IUU Vessel List
ICCAT	International Commission for the Conservation of Atlantic Tunas IUU Vessel List
IOTC	Indian Ocean Tuna Commission List of IUU Vessels
NAFO	Northwest Atlantic Fisheries Organisation IUU List
NEAFC-A	North East Atlantic Fisheries Commission A List
NEAFC-B	North East Atlantic Fisheries Commission B List
SEAFO	South East Atlantic Fisheries Organisation List of IUU Vessels
WCPFC	Western and Central Pacific Fisheries Commission IUU Vessel List
SPRFMO	South Pacific Regional Fisheries Management Organisation IUU List

APPENDIX E

GRCG-TP/2015/03: DISCUSSION ITEMS ON THIRD PARTY DATA (GRCG-TP)

From the early stages of design, the Global Record was conceived as an information system that could be of benefit to users through its dissemination of widely certified information already available through certain recognized sources, such as the former Lloyds Register of Vessels, now maintained by IHS Maritime. As we move forward into development and implementation, it is necessary to make recommendations with regards to the role that third parties[15] could play. These third party entities have been mentioned and preliminarily considered in several documents and meetings of the Global Record, and have the potential to expedite implementation of the system. Participants of this Core Group are to examine the options below for each prospective third party data provider and recommend the way forward, in line with ownership-related (managerial and legal) considerations of data use.

IHS MARITIME

Possible roles:

1. Interim data provider for vessel information (Vessel Details information module)
2. Source of historical information (Historical Details information module)
3. Cross-checking of information

The role that IHS Maritime (IHSM) could play in the development of the Global Record, as the manager of the IMO Ship Identification Numbering Scheme on behalf of IMO, has been raised on various occasions[16] . Furthermore, the use of the IMO number as the Unique Vessel Identifier (UVI) for Phase 1 of the Global Record (vessels above 100 GT) was agreed to by COFI 31.

The first meeting of the Global Record Open-Ended Technical and Advisory Working Group (GRWG1) stressed that the States are the official and certified entities that may submit data to the Global Record (data providers). In the case of the Vessel Details information module, including the identification of the vessel, structural characteristics and ownership, the GRCG-DR is likely to recommend that the flag State, as the owner of the data, be the official data provider.

Realistically, given domestic requirements, data from flag States may not be readily available within a short timeframe. As an interim measure, and with the goal of having a functional version of the Global Record publicly available in the shortest time frame, whilst allowing other data providers to submit any other available information apart from the Vessel Details module[17], the relevant information currently available with IHSM (around 22,000 fishing vessels, mainly over 100 GT) could be integrated in the first version of the system. It is important to reiterate that the entire information module for a vessel should come from a single data provider, so particular fields, if any, that are not available in the IHSM dataset would not be able to be submitted by a different data provider to fill the gaps. Similarly, some data fields from the IHSM dataset would not be able to be used to fill in the gaps in States' data.

This temporary solution would allow the Global Record system to disseminate basic vessel information on the full set of fishing and fishing-related vessels carrying IMO numbers, thus also allowing other data providers such as port or coastal States to submit other information, such as compliance details and authorisation details. IHSM could also provide the Historical Details (flag, name and owner) of the same vessels prior to their inclusion in the Global Record, thus covering two

[15] Third parties refer to data providers other than FAO Members.
[16] Refer to GRCG-TP background documents.
[17] Refer to GRCG-DR/2015/03 Data Requirements

information modules. The Vessel data provided by IHSM would be replaced by flag State data when officially submitted by the relevant flag State. This procedure could also apply to historical information, should a State provide back-dated historical information for vessels for the period during which they were under its flag, including those which are no longer in their register.

Should this option be agreeable, consideration should be given to the legal and administrative relationship between FAO and IHSM, also taking the long-term viability into account. The provision of vessel information related to the IMO number, and collected and updated by IHSM, has in the past been addressed through an agreement between FAO and IHSM. Nevertheless, as indicated during the GRWG1, IHSM, in building their fishing vessel database and allocating IMO numbers to fishing vessels, will also need information held by flag States and possibly other authorities to cross-check their data sources. This data could eventually be provided by the Global Record, should the States, as data owners, agree. This bi-lateral exchange could clearly develop into a mutually beneficial relationship, the nature of which has to be carefully considered. Alternatively, the full Vessel Details information module, including the IMO number, could be provided by the flag State once it is in a position to submit the data to the Global Record.

Should the experts decide against the option of IHSM providing data which would be directly accessible through the Global Record, IHSM could still play a role in the cross-checking of the information. Apart from the Vessel and Historical information from flag States, FAO could receive an information package from IHSM, that would not be integrated or disseminated through the Global Record, but that would be used to check for possible errors or inconsistencies in the data submitted by the States. There may be instances where States register vessels without having a full picture of the historical details of such, and inconsistencies may be found in any of the vessel details reported, compared with previous records of such vessels. In such case, and subject to its explicit mandated responsibilities, FAO would generate a report to both the State as the data provider and IHSM indicating the inconsistencies to be resolved and await confirmation or modification of the information by the relevant flag State, possibly marking the vessel as ‘under verification´. Consideration would need to be given to the type of relationship between FAO Global Record and IHSM, also in the event of IHSM information being used for cross-checking.

Experts are reminded that any recommendations made should consider the cost-effectiveness and sustainability in the future.

EQUASIS

POSSIBLE ROLE:

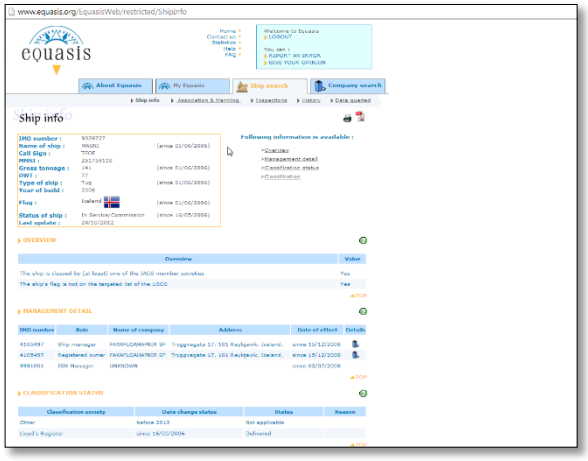
1. Complementary to the information gathered by the Global Record

The EQUASIS database of cargo vessels is an online information system which disseminates records received from the Regional MOUs (Memoranda of Understanding) on Port State Control under the IMO and National Maritime Authorities, IHSM, classification societies, and other national sources. Its aim is to reduce substandard shipping by providing basic vessel identification and data related to ship safety, protection and indemnity, classification status, inspection results and more, on a vessel-by-vessel basis. EQUASIS has been put forward on several occasions as a possible complementary solution to including information on refrigerated transport vessels and supply vessels into the Global Record.

In many cases, the authority responsible for the registration of fishing vessels in a certain State is different from the authority registering other types of vessels and thus a full set of information could be

difficult to obtain in a first instance, should there be lack of internal coordination (e.g. among fisheries and maritime authorities) or other arrangements[18] in the flag State.

As proof of concept of a potential solution, the prototype system of the Global Record included a deep hyperlink to the full data set of information available within the EQUASIS database, for a particular vessel identified as fishing-related by the flag State. This information contains both relevant items for the Global Record, such as vessel identification and characteristics, and also information that goes beyond the main requirements, such as safety certificates, that may be relevant in the future.



Still, in order to create the link into EQUASIS, the individual record, at least including the UVI and basic identification information, of vessels carrying out activities in support of fishing (refrigerated transport vessels and supply vessels) needs to be obtained either from IHSM, if their register is in a position to indicate which such vessels are, or the flag State. The additional information can also be provided by the relevant flag State or, as in the case of the prototype as mentioned above, displayed through a deep hyperlink to the EQUASIS database. It is important to emphasize that, in any case, specific data related to transhipment or landing authorisations, inclusion on IUU lists and so on, may be provided by the relevant State or RFMO.

GISIS (IMO)

Possible role:

1. Complementary to the information gathered by the Global Record

The IMO database, called GISIS (Global Integrated Shipping Information System), makes information on vessels, including fishing and fishing-related vessels, publicly available. The information is gathered from, and managed by, IMO Member State Administrations and ranges from basic ship particulars to reports of piracy and armed robbery, which could be very valuable to the Global Record, and other information such as pollution prevention, marine casualties and incidents.

A proposal similar to the deep hyperlink into the EQUASIS system could be put forward to link the Global Record to GISIS, on a vessel-by-vessel basis using the UVI, and make it simpler for users to access the extensive information through a single entry point.

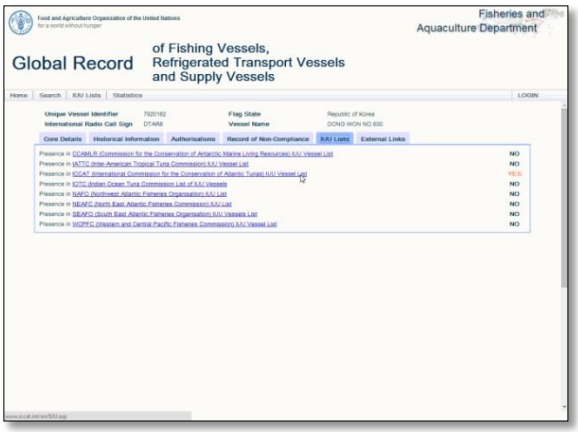
[18] E.g.: Currently the EU Fleet Register does not contain non-fishing vessels, thus this information would need to be provided either by the Maritime or Fisheries Authorities of the relevant flag States.

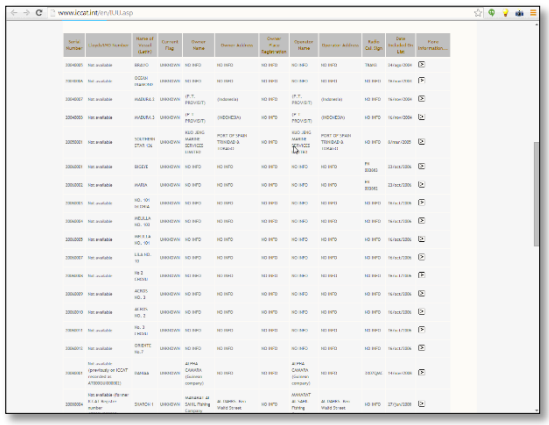
IUU LISTS OF RFMOS

Possible role:

1. Complementary to the information gathered by the Global Record

The Global Record prototype put forward a suggestion to link the Global Record to the official RFMO IUU lists. Should RFMOs forward basic information indicating a vessel's presence on an IUU list[19], a link to the RFMO's site could be set up for users to obtain further details related to the listing. As in the case of EQUASIS, the full data set will remain separate from the Global Record and would be displayed through a link, using the UVI.





INTERPOL PURPLE NOTICES

Possible role:

1. Complementary to the information gathered by the Global Record

INTERPOL, the world's largest international police organisation, issues purple notices to request or provide information about criminal activity, including illegal fishing activity and other illicit activity carried out by fishing vessels.

Purple notices are in the public domain and provide information such as the description of the suspected crime; basic vessel details; history of name, flag, owners and RFMOs; photos and other documentation. Whilst some of this information falls under the Global Record data requirements, there is also additional information which could be interesting to the users.

This working group might wish to evaluate the benefits and viability of including a link to INTERPOL's system, in a similar way to the RFMO IUU Lists.

ANY OTHER RELEVANT AND CERTIFIED DATA SOURCE

Experts are encouraged to put forward any suggestions of other relevant systems with information that could add value to the Global Record.

[19] According to the outcome of the GRCG-DR

APPENDIX F

GRCG-DE/2015/03: DATA EXCHANGE OPTIONS FOR THE GLOBAL RECORD

Data collection is a key aspect of the Global Record and, thus, its success is dependent on the selection of data exchange mechanisms that allow maximum data submission by data providers, with minimum effort.

Data exchange options were a topic of discussion during the first meeting of the Global Record Open-Ended Technical and Advisory Working Group. The group recognised the importance of **defining a set of standards** for data exchange, limiting their number and reducing flexibility to keep the system manageable and scalable. However, a few different options must be made available to cover the varying capabilities and requirements of States, and RFMOs, as there will also be need for much time and capacity development to ensure that all systems are in line.

This document puts forward some proposals for data exchange as is required for submission of information to the Global Record[20], with regards to the data formats and transmission mechanisms. The options put forward should be evaluated on the basis of **ease of implementation and operation**, **risk of errors**, **reliability** and **durability**. In discussing these options, due consideration should be given to the **systems which are already in place** and will be required to submit data to the Global Record, and experts are encouraged to introduce any relevant ideas which are not already mentioned. A forward-looking and comprehensive approach should be taken in that the Global Record, as an inclusive international system, could set the baseline for the data exchange of vessel-related information in other contexts too.

DATA FORMAT STANDARDS

The following are a few text-based data transfer formats being proposed. Each of these, for which a fixed structure would have to be defined, could be considered for either of the transmission mechanisms mentioned in the following section.

XML files and UN/CEFACT standards

XML (eXtensible Markup Language) is a well-established and widely-accepted text format, formally standardised by W3C. It is highly structured, including markup for metadata, and is flexible enough to handle complex hierarchies and relationships. XML is a robust format, and can easily be validated using appropriate schemas. However, the markup tags also make it long and verbose, and difficult to manage manually. As a format that has long been in use for automated electronic data exchange, there are numerous tools that support the creation and parsing of XML files, and facilitate its application.

UN/CEFACT[21] XML Schemas are domain-specific standardised electronic business formats. The EU DG-MARE's FLUX project has put forward business requirements specifications for a number of fisheries domains, which have resulted in UN/CEFACT XML Schemas being made publicly available to cover the business layer of data exchange. The Global Record team has collaborated on the standardisation of the UN/CEFACT Fishing Vessel domain[22], which covers the Global Record Vessel

[20] At this point in time, one-way data transmission will be considered, from data providers to the Global Record. Further discussion will be required for the consideration of cross-system transmission, and data dissemination by the Global Record to other organisations or agencies, and will be dealt with at a later stage, if required.

[21] http://www.unece.org/cefact/

[22] Refer to document FLUX_P1000-2 Vessel domain in the Background Documents folder

information module. A UN/CEFACT Fishing Licences, Authorisations and Permits domain[23] is also available, and may eventually require modification to be brought in line with the Global Record Authorisation information module, as it will be agreed. Further work would be required to obtain UN/CEFACT XML Schemas for the Compliance Details, other MCS information, and any other relevant future domains.

JSON

JSON (JavaScript Object Notation) is a modern data exchange format this is currently prevailing as a leading protocol online. It is lightweight, using simple and concise key-value pairs with little markup overhead and, although it works best with tabular data, it can also handle hierarchies. JSON is easy for humans to read and write and also for software to encode and parse, with popular web development stacks ready for its application due to its use with web-based APIs. However, the fact that it is not schema-based makes it less robust and harder to validate and, thus, strict specifications would have to be decided upon by this group, to verify structural integrity and data type consistency, and facilitate processing of this format.

CSV

CSV (comma-separated values) is a very simple format that is compact, with no markup or metadata. However, it is not too versatile and most suited to raw table data, with relationships being trickier to encode. CSV does not inherently cater for validation, and customised procedures are also necessary to generate and process such files. Such custom implementations may lead to incompatibilities, for instance due to special characters used to quote strings, terminate data rows or delimit fields, which must all be catered for in advance. As in the case of JSON, the group would have to come up with format specifications for CSV, including serialisation parameters, to implement a standard implementation amongst all data providers and avoid receiving garbled CSV. The main advantage of using CSV files lies in the fact that such files can be accessed through common spreadsheet software, making them easily managed manually and a useful option to accommodate data providers without information systems that can generate the data files for transmission automatically.

DATA TRANSMISSION MECHANISMS

Web APIs

In considering the term ‘web API’ in its general sense, without referring specifically to the traditional web service build over SOAP and described in WSDL or, conversely, to REST based communication[24],this mechanism would provide a programmatic interface through which data provider systems could automatically submit their data in a text-based format. This method of communication between software systems is widespread and durable, technology-independent and makes use of the common internet for interoperability. Setting up such a channel requires little software development effort.

Upload through website

Since web APIs for submitting data cannot be accessed through a browser, an upload website could be created to provide a user interface. This would eliminate the automated system-to-system requirement and allow for manual upload for any format of file agreed upon. This method of submitting information is highly dependent on human intervention and, therefore, not as reliable; it could be

[23] Refer to document FLUX_P1000-9 FLAP domain in the Background Documents folder

[24] Such details will be discussed and agreed upon at a later stage, but any comments which may be put forward at this point are also welcome.

considered as an intermediate option to bridge the gaps once a system is in place to generate the required data files but not to exchange them automatically.

FLUX transportation layer

Once again adding a layer over web services, the transportation layer of FLUX (Fisheries Language for Universal eXchange) offers a business-agnostic protocol to create a secure and configurable network between different parties' IT systems. Built over SOAP and WSDL, this mechanism provides an envelope that can contain a business message, and software which serves as infrastructure to transport the envelopes, and their content, from sender to destination through a hierarchical routing system. FLUX is strongly tied to XML as a data format, and, more specifically. UN/CEFACT standardised XML Schemas, as this is the only business layer pre-requisite for the files which may be exchanged using this transportation layer. Being the solution of choice for EU's DG-MARE, FLUX is already in place in a number of countries, which will be required to exchange vessel information using this mechanism. Although it may be considered more heavyweight than other approaches, open-source free software is progressively being made available to facilitate adherence to FLUX and simplify the effort needed to put this mechanism into operation.

Email

This widespread method for exchanging messages is very basic, but offers an effective solution for asynchronous data processing and could be considered for situations where standard transfer mechanisms are not available and, particularly, when there are issues with network connectivity. A system for automated processing at the receiving end would be put in place to avoid reliability issues related to human intervention, and to provide email receipts and error reporting to the sender. If implemented, this option would be a temporary or intermediate measure, to provide a simple alternative whilst data transmission mechanisms are being set up.

a. Proposed Solutions

The proposed solutions being put forward, as a starting point for discussion, are the following, in order of implementation:

- CSV over email
- UN/CEFACT XML over website upload
- UN/CEFACT XML over FLUX
- UN/CEFACT XML over web API

Given the pros and cons of the different formats mentioned previously, it may not be necessary to implement a JSON solution. The benefits of using JSON over XML are few, and any systems capable of generating JSON should also be capable of generating XML, albeit with more effort, so it may be advantageous to limit to data formats to two and standardise to the maximum.

Any experts with differing views, or other propositions to make, are encouraged to share their preferences, with justification.

Blurb

Barcode

R...

FAQ/ WORKSHOP....

FAO