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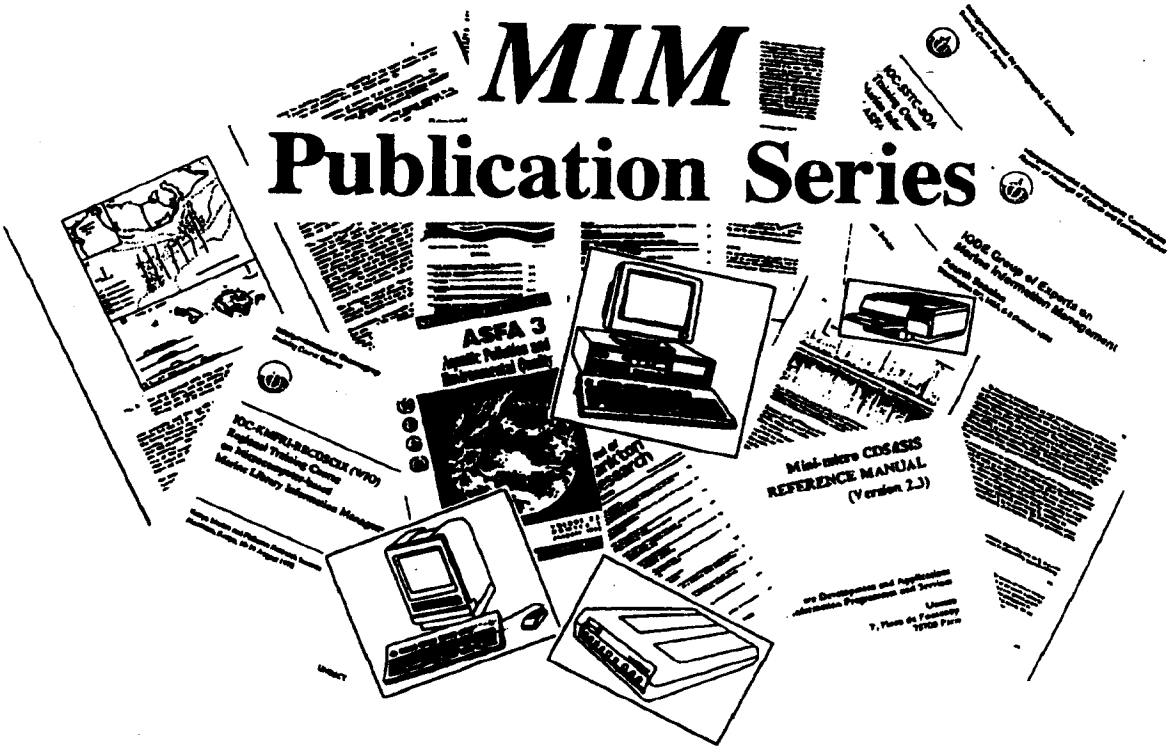
Standard Library Directory Record Structure



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Abstract

In this manual a Standard Library Directory Record Structure is proposed, for use in the preparation of databases of libraries and information centres. The structure is designed to be, as far as is possible, independent of the software used. Provision is made for additional fields for local needs. The structure incorporates the section of the Standard Directory Record Structure for organizations, individuals and their research interests which deals with organizations (MIM Publication Series Volume 4).

Foreword

This is the fourth volume in a new series called **'MIM Publication Series'**. The production of this series was agreed upon by the IODE Group of Experts in Marine Information Management (GEMIM) during its Fourth Session (Washington DC, USA, 6-9 October 1993. There, it was observed that documents currently published as part of the IOC publications series do not reach all members of the target groups of MIM. It was also noted that documents prepared as working documents for the Group's sessions were not fully put to use as they were never distributed beyond the Group members. It was agreed that some working papers merit general distribution. The MIM Publication Series provides MIM related papers with their proper identity within the IOC publications as separate volumes of IOC Manuals and Guides No. 30. The series may include manuals, selected working papers, strategy papers, working group reports, standards, directories, etc. The publications in this series are reviewed by a committee composed of experts with experience relevant to the topic of the publication.

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1. INTRODUCTION

At the third session of the Group of Experts on Marine Information Management, Wormley, UK, 27-30 April 1992, there was a discussion of the need for the continued development of directories and registers. Taking into consideration the resolutions formulated at past meetings, the Group expressed the need for the development of a Standard Directory Record Structure. It was recommended that IOC, in association with EURASLIC and IAMSLIC, should work together to develop a standard structure, and this was designed by a small working group, and published by IOC (Moulder et al., 1994). Further to this discussion, it was agreed at the fourth session in Washington, D.C., USA, 6-9 October 1993, that a standard structure for a library directory should also be prepared. This could include those sections of the Standard Directory Record Structure which were common to both requirements.

2. PURPOSE

(i) To provide a Standard Library Directory Record Structure which can be used by national/ regional/international groups, but which can be modified where necessary for local needs.

(ii) To provide a structure which includes provision for details of institutions, the library or information centre, its staff, collections, services, user policy, electronic access, publications etc.

(iii) To provide a structure which is, as far as is feasible, software independent.

(iv) To provide a structure which is independent of the form in which the directory exists, whether printed, on diskette, on CD-ROM, or online on a host. It should, however, allow for the preparation of the necessary indexes and tools for its use, and should use standard authority lists where possible.

3. THE ESTABLISHMENT OF A STANDARD LIBRARY DIRECTORY RECORD STRUCTURE WORKING GROUP

A small working group with representatives from EURASLIC and IAMSLIC was set up to compare and contrast existing directory structures, and to recommend a standard structure. The membership of the group was:

Martha Andrews	(Institute of Arctic and Alpine Research (IAAR), Boulder, USA)
Peter Brueggeman	(Scripps Institution of Oceanography (SIO), San Diego, USA)
Charles McFadden	(Virginia Institute of Marine Science (VIMS), Gloucester Point, USA)
David Moulder	(Plymouth Marine Laboratory (PML), Plymouth, UK (convenor))
Paula Wolfe	(University of Wyoming (UW), Laramie, USA)

This manual is the result of the cooperative effort of this group.

4. REVIEW OF EXISTING STRUCTURES

A number of existing library directory structures were used as a basis for the discussions. These included the EURASLIC and IAMSLIC directories, as well as those of the *Bibliothèques et Centres de Documentation français pour la Mer et les Eaux, the Libraries and Environmental Information Centers in Central Eastern Europe*, the *World Directory of Libraries*, and the *Directory of Polar and Cold Regions Library Resources*.

4.1 COMPARISON OF THE STRUCTURES

The majority of the structures were very similar, the main difference being the amount of detail that was included. The *World Directory of Libraries* gave least information, reflecting the need to cover thousands of libraries from across the world. All included some information on the parent organization, including address and phone number, a library staff contact, a description of subject coverage and holdings, and services. The EURASLIC structure was the only one developed for the Unesco CDS/ISIS software.

4.2 COMMON COMMUNICATION FORMAT (CCF)

The Common Communication Format (CCF) was developed under the auspices of Unesco in order to facilitate the exchange of bibliographic data between organizations. Initially CCF was limited to bibliographic data, but in recent years it has been extended to factual data, and there are now two formats, CCF/B for bibliographic data, and CCF/F for factual data, having relevant data elements in common. The aim is to provide a detailed and structured method for recording a number of mandatory and optional data elements in a computer-readable record for exchange purposes between two or more computer-based systems. The Standard Library Directory Record Structure is capable of producing CCF-compatible output.

5. REQUIRED ELEMENTS FOR A STANDARD LIBRARY STRUCTURE

A standard structure will need to have a number of defined elements, which can be completed in as much detail as is required by the user. It is suggested that the following defined elements will be required:

Organization

Information will be required to (i) identify the organization (name, acronym), (ii) locate it (address), (iii) communicate with it (address, phone, telex, telegram, fax, E-mail), (iv) put it in context (Affiliation, subjects covered, description of activities).

Library

Information will be required to (i) identify the library (name), (ii) locate it (department, organization, address), (iii) communicate with it (address, staff, phone, telex, telegram, fax, E-mail), (iv) describe it (collections, services, user policy, electronic access, publications).

Indexing

The following information will be required to index both of the above: (ASFIS codes, index terms, environment).

House-Keeping

The following house-keeping information will be required by the database: (header, sort codes, when updated, by whom updated).

6. A STANDARD LIBRARY STRUCTURE AND SOFTWARE INDEPENDENCE

UNESCO's CDS/ISIS software allows for a number of possibilities which may or may not be available in other softwares:

Subfields

CDS/ISIS uses subfields, for linked parts of an entity, e.g. surname, first name, other names, title. In case other softwares do not have this feature each part of the entity has been placed in a separate field. However within CDS/ISIS it would be possible to use the subfields, for example for fields 120-121 (as 120^a, 120^b), 130-132 (as 130^a, 130^b, 130^c) etc. For the Standard Library Directory we have chosen to use the subfields as little as possible to leave the option to use softwares other than CDS/ISIS.

Repeatable Fields

CDS/ISIS uses repeatable fields, for example for phone numbers where there may be several numbers for an organization. These can be separated by punctuation in other softwares, if repeatable fields are not allowed. In the Standard Library Directory we have used repeatable fields. When using another software you must therefore identify an acceptable and applicable alternative.

Linking Records

CDS/ISIS links records using a **reference function**, which links together records having a *sort code* in common. This is a function which compensates for a limitation of CDS/ISIS: only one database can be opened. The reference function, in the case of the Standard Library Directory, will require you to enter the organization information only once for all libraries related to a given organization. The sort code will allow the CDS/ISIS software to retrieve the organization information (of fields 3 to 199) and display it together with the library-related information (fields 600 to 699) for a particular library. If you don't use the CDS/ISIS software, then it may be necessary to enter the organization information for all libraries. Alternatively you can create several databases which can be related to each other through the sort codes.

These are the linkages which may be made for the Standard Library Directory Database:

Linking Libraries to their Organizations

Each record for a library need only contain the identification of the related organization (i.e. its sort code in field 601). This identification will allow CDS/ISIS to borrow the desired information on the organization from the relevant organization record, to be included with the output on the library.

Linking Organizations to a Related Library

It will also be necessary to link records in the reverse direction, taking information from library records to include with an organization record. The same technique is used, using the sort code in field 3.

Linking Individuals to their Department

It will be necessary to link each member of staff to their parent department, taking information from individual records to include with a department record. The same technique is used, using the sort code in field 619.

Linking ASFIS Codes with their Full Meaning

By adding to the database a set of records containing the ASFIS Codes (in field 450) and their full meaning (in field 455), the CDS/ISIS Ref Function can be used to produce the ASFIS Codes with their full meaning for all records containing one or more ASFIS Codes (in fields 192 or 692).

7. THE STANDARD LIBRARY STRUCTURE

The following standard structure is proposed. It should be noted that the numbering of the fields is for guidance only. Other softwares may have a different requirement for the labelling of fields. Additional fields may be added if needed for a particular reason (see fields 900 onwards). The length of the field, and the field type, are at the discretion of the users of the structure. The structure has been defined to be as wide-ranging as possible. Users may not want, or need, particular sections of it, but the structure tries to cover all eventualities. Please note however that we have used repeatable fields as well as subfields, features which may not be available in all softwares. In that case it may be necessary to add some fields replacing the subfields/repeatable fields.

7.1 FIELD LIST

Tag	Up to three figure number label for each field
Name	Name of the field
Length	Maximum number of characters in each field
Field Type	Possible restrictions on data characters in a field: X = alphanumeric characters; N = numeric characters
Rep	Indication of whether field is repeatable
Subfields	Indication of whether there are subdivisions in the field

Tag	*Name*	*Length*	*Field Type*	*Rep*	*Subfields*
Main housekeeping field					
1	**Record Identifier**	20	X	No	No
Fields related to the Organization					
2	**Header**	20	X	No	No
3	**Sort Code**	30	X	No	No
21	**Completeness of Record**	30	X	No	Yes
62	**Type of Factual Information**	3	X	No	No
100	**Organization Name (Original)**	100	X	No	No

Tag	*Name*	*Length*	*Field Type*	*Repeatable*	*Subfields*
101	**Organization Name (English)**	100	X	No	No
105	**Acronym**	30	X	No	No
110	**Affiliation**	100	X	No	No
111	**Date of Creation**	8	N	No	No
120	**Number/Letter**	10	X	No	No
121	**Street**	60	X	No	No
122	**Building**	60	X	No	No
123	**The Floor**	10	X	No	No
124	**PO Box**	30	X	No	No
130	**Postal Code**	20	X	No	No
131	**Town/city**	60	X	No	No
132	**Postal Code**	20	X	No	No
140	**Postal Code**	20	X	No	No
141	**County/state/province**	60	X	No	No
142	**Postal Code**	20	X	No	No
150	**Postal Code**	20	X	No	No
151	**Nation**	60	X	No	No
152	**Postal Code**	20	X	No	No
160	**Postal Code**	20	X	No	No
161	**Country (Original)**	60	X	No	No
162	**Postal Code**	20	X	No	No
163	**Country (English)**	60	X	No	No
164	**ISO Country Code**	2	X	No	No
170	**Head of Organization (Surname)**	60	X	No	No
171	**Other Names**	80	X	No	No
172	**Title**	40	X	Yes	No
173	**Position in Organization**	60	X	Yes	No
180	**Phone**	80	X	Yes	No
181	**Fax**	80	X	Yes	No
182	**Telex**	80	X	Yes	No
183	**Telegram**	80	X	No	No
184	**E-mail**	80	X	Yes	No
185	**URL**	160	X	Yes	No
190	**Description of Activities**	500	X	Yes	No
191	**Subjects**	500	X	Yes	No
192	**ASFIS Codes**	500	X	Yes	No
193	**Environment**	60	X	Yes	No
199	**Notes**	500	X	No	No
Fields for the ASFIS descriptors					
450	**ASFIS code**	4	X	No	No
455	**ASFIS code description**	120	X	No	No
Housekeeping Fields					
511	**Date of Original Entry**	8	N	No	No
512	**Last Update**	8	N	No	No
513	**Keyboarder**	60	X	No	No

Tag	*Name*	*Length*	*Field Type*	*Repeatable*	*Subfields*
Fields related to the Library					
	Department				
600	**Department Name**	100	X	No	No
601	**Sort Code**	30	X	No	No
602	**Date of Creation**	8	N	No	No
605	**Department Phone**	80	X	Yes	No
606	**Department Fax**	80	X	Yes	No
607	**Internet Document Transmission Address**	80	X	Yes	No
608	**E-Mail**	80	X	Yes	No
609	**URL**	80	X	Yes	No
	Individual				
610	**Name**	60	X	No	No
611	**Other Names**	80	X	No	No
612	**Title**	40	X	Yes	No
613	**Function**	60	X	Yes	No
614	**Sex**	10	X	No	No
615	**Phone**	80	X	Yes	No
616	**Fax**	80	X	Yes	No
617	**E-Mail**	80	X	Yes	No
618	**URL**	80	X	Yes	No
619	**Sort Code**	30	X	No	No
	Collection				
620	**Collection Description**	500	X	Yes	No
621	**Serial Titles (Current)**	20	X	No	No
622	**Books/Monographs**	20	X	No	No
623	**Reports**	20	X	No	No
624	**Reprints**	20	X	No	No
625	**Expedition Reports**	20	X	No	No
626	**Atlases**	20	X	No	No
627	**Maps and Charts**	20	X	No	No
628	**Theses**	20	X	No	No
629	**Microfiches**	20	X	No	No
630	**Microfilms**	20	X	No	No
631	**Audio Material**	160	X	No	No
632	**Video Material**	160	X	No	No
633	**Other Media**	160	X	No	No
634	**Archives**	500	X	Yes	No
635	**Illustrations**	500	X	Yes	No
636	**Special Collections/Facilities**	500	X	Yes	No
637	**Union Lists**	160	X	No	No
638	**Acquisition Policy**	160	X	No	No

Tag	Name	Length	Field Type	Rep-eatable	Subfields
	Services				
640	**Classification System**	20	X	No	No
641	**Card Catalogues**	160	X	Yes	No
642	**Online Catalogues**	160	X	Yes	No
643	**Databases/CD-ROMs**	160	X	Yes	No
644	**Network Participation**	160	X	Yes	No
645	**Other Services**	500	X	Yes	No
646	**Software**	160	X	Yes	No
	User Policy				
650	**Access (internal)**	160	X	No	No
651	**Access (external)**	160	X	No	No
652	**Opening Hours**	500	X	Yes	No
653	**Loans/Charges**	160	X	Yes	No
654	**Photocopies/Charges**	160	X	Yes	No
	Electronic Access				
660	**World Wide Web (WWW)**	160	X	Yes	No
661	**Gopher**	160	X	Yes	No
662	**Telnet**	160	X	Yes	No
663	**FTP**	160	X	Yes	No
664	**Dialup**	160	X	Yes	No
	Publications				
670	**Organization - Printed**	240	X	Yes	No
671	**Organization - Electronic**	240	X	Yes	No
672	**Department - Printed**	240	X	Yes	No
673	**Department - Electronic**	240	X	Yes	No
	General Information				
692	**ASFIS Codes**	500	X	Yes	No
693	**Environment**	60	X	Yes	No
699	**Notes**	500	X	No	No
900	All the 900's are for locally defined fields, to cater for specific needs.				

7.2 FIELD DESCRIPTIONS

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*
1	**Record Identifier**	20	X	No	No

This fields provides a unique identifier of the record and is user-defined. Accordingly you can define your proper format.

Tag	Name	Length	Field Type	Rep-eatable	Subfields

e.g.: DIR12345

2	**Header**	20	X	No	No

This is a global field which appears in all records, and allows one to select a set of all records, by using the same keyword. For example the name of the database could be used (WIODIR, UKMERG)

3	**Sort Code**	30	X	No	No

This is a code to link records together. It will be unique to each subsection of the main organization, or to each organization, depending on whether subsections are entered as separate records or not. The Sort Code can be of the form ISO Country Code/city or town/organization, e.g. KE/ MOMBASA/ KMFRI for the organization, KE/ MOMBASA/ KMFRIA for the first department, KE/ MOMBASA/ KMFRIB for the second department etc., or a simpler solution would be K/M/K, using the same elements, but ensuring that each sort code is unique

21	**Completeness of record**	30	X	No	Yes

This is an indication of whether the record includes mandatory, optional or local data elements: whether it is a CIP (cataloguing in Publications) record, or it has been prepared using the published item.

subfields ^c: completeness code :
- 1: 1= only standard (i.e. mandatory or optional) data elements present in the record
- 2= local data elements present in the record
- 0= not specified

2: 0

^l: level of completeness (A= all mandatory and all optional elements provided)
(B= all mandatory elements provided)
(C= Less than all mandatory elements provided)

e.g. ^c10^lAB (the record contains only the mandatory elements)

62	**Type of Factual Information**	3	X	No	No

This indicates which kind of information is included in the record. For the directory there are 4 types:

- INS: Institutional information
- DEP: Department Information
- PER: Personal Information
- ASF: ASFA Code

100	**Organization Name (Original)**	100	X	No	No

The name of the organization in its original language

e.g.: Centre de Recherches Océanologiques

Tag	*Name*	*Length*	*Field Type*	*Repeatable*	*Subfields*
101	**Organization Name (English)**	100	X	No	No

The name of the organization in English, if the original name is in another language

e.g.: Oceanological Research Centre

105	**Acronym**	30	X	No	No

The acronym of the original language organization name

e.g.: CRO

110	**Affiliation**	100	X	No	No

The institution controlling/responsible for/advising the organization

e.g.: Ministry of Research, Science and Technology

111	**Date of Creation**	8	N	No	No

The date of creation of the organization in the form YYYYMMDD

e.g. 19680312

120	**Number/Letter**	10	X	No	No

The number/letter in the street

e.g.: 201

121	**Street**	60	X	No	No

The name of the street

e.g.: Ocean Front Lane

122	**Building**	60	X	No	No

The name of the Building

e.g.: Whale Memorial Building

Tag	Name	Length	Field Type	Rep-eatable	Subfields
123	**The Floor**	10	X	No	No
The floor in the Building e.g.: 5th Floor					
124	**PO Box**	30	X	No	No
The Post Office Box Number e.g.: 2456					
130	**Postal Code**	20	X	No	No
The numbers/letters **before the town/city name** e.g.: 1000 *(as in 1000 Brussels)*					
131	**Town/city**	60	X	No	No
The name of the town or city in the original language e.g.: Brussels					
132	**Postal Code**	20	X	No	No
The numbers/letters **after the town/city name** e.g.: PL1 2PB *(as in Plymouth PL1 2PB)*					
140	**Postal Code**	20	X	No	No
The numbers/letters **before the county/state/province name**					
141	**County/state/province**	60	X	No	No
The name of the county/state/province in the original language e.g.: CA *(as in California)*					
142	**Postal Code**	20	X	No	No

Tag	Name	Length	Field Type	Rep-eatable	Subfields
	The numbers/letters **after the county/state/province name**				
	e.g.: 92093-0175 *(as in CA 92093-0175)*				
150	**Postal Code**	20	X	No	No
	The numbers/letters **before the name of the nation**				
151	**Nation**	60	X	No	No
	The name of the nation in the original language				
	e.g.: Scotland				
152	**Postal Code**	20	X	No	No
	The numbers/letters **after the name of the nation**				
160	**Postal Code**	20	X	No	No
	The numbers/letters **before the name of the country**				
161	**Country (Original)**	60	X	No	No
	The name of the country in the original language				
	e.g.: Nederland				
162	**Postal Code**	20	X	No	No
	The numbers/letters **after the name of the country**				
	e.g.: K1A 0E6 *(as in Canada K1A 0E6)*				
163	**Country (English)**	60	X	No	No
	The name of the country in English				
	e.g.: The Netherlands				
164	**ISO Country Code**	2	X	No	No
	The ISO 3166 2-letter Country Code as shown in Annex I				

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

e.g: NL

170	**Head of Organization (Surname)**	60	X	No	No

The surname of the head of the organization

e.g.: Murillo

171	**Other Names**	80	X	No	No

The other names of the head of the institution

e.g: Eduardo T.

172	**Title**	40	X	Yes	No

The title(s) of the head of the head of the organization. Separate each title by a percentage (%) sign

e.g.: Professor%Dr%Mr

173	**Position in Organization**	60	X	Yes	No

The organizational title(s) of the head of the organization, e.g. Director, Head, Dean. Separate each title by a percentage (%) sign

e.g.: Dean, Faculty of Science%Head of Zoology Department

180	**Phone**	80	X	Yes	No

The main phone number(s) of the organization, in the international format, i.e. country code, area code, number. Each number will be separated by a percentage (%) sign

e.g.: 254-11-471129%254-11-472527

181	**Fax**	80	X	Yes	No

The main fax number(s) of the organization, in the international format, i.e. international code, area code, number. Each number will be separated by a percentage (%) sign

e.g.: 32-2-6413403

182	**Telex**	80	X	Yes	No

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

The telex number of the organization, followed by the Answerback, followed by the network (when applicable), each separated by a semi-colon and three spaces. Each number will be separated by a percentage (%) sign

e.g.: 23456; OCEAN W; Sprint

183	**Telegram**	80	X	No	No

The telegraphic address

e.g.: OCEANS MOMBASA

184	**E-mail**	80	X	Yes	No

The E-mail address(es), each in the form of E-mail Network, followed by semicolon and three spaces, followed by the Address, and each address separated by a percentage (%) sign

e.g.: compuserve; ncmr@compuserve.com

185	**URL**	160	X	Yes	No

The URL (Uniform Resource Locator) address(es) of the home page(s) of the organization, and each address separated by a percentage (%) sign

e.g.: http://www.unesco.org/ioc/

190	**Description of Activities**	500	X	Yes	No

A brief description of the activities of the organization. Paragraphs in the text may be separated by a percentage (%) sign

e.g.: The CRO is involved in oceanological research. The main research fields are (i) pollution of the Mondego Bay; (ii) aquaculture of mangrove oysters; (iii) coastal erosion. The CRO has an advisory role to the Ministry of Tourism as well as to the Ministry of Planning. The CRO has several cooperation agreements with national institutions such as University of Malalang, University of Boma, as well as with international agencies such as UNESCO, IDRC, IOC and FAO.

191	**Subjects**	500	X	Yes	No

A keyword description of the activities of the organization, which can be taken from the ASFIS Thesaurus (ASFIS REFERENCE SERIES, No. 6 Revision 1), separated by a percentage (%) sign

e.g.: Pollution Control%Pollution Detection%Aquaculture%Coastal Erosion

Tag	*Name*	*Length*	*Field Type*	*Repeatable*	*Subfields*
192	**ASFIS Codes**	500	X	Yes	No

The ASFIS codes describing the activities of the organization, separated by a percentage (%) sign
A full list of ASFIS codes is included as Annex II

e.g.: 1521%1820

193	**Environment**	60	X	Yes	No

The environments in which the organization is working, i.e. brackish, fresh, marine, separated by a percentage (%) sign

e.g.: marine%brackish

199	**Notes**	500	X	No	No

Any additional information about the organization

e.g.: Was previously called Centre for Oceanographic Research

450	**ASFIS code**	4	X	No	No

This field will contain the 4-digit ASFIS code which is described in full in field 455. For each ASFIS code a separate record will be used with only fields 450 and 455 filled.

e.g.: 1306

455	**ASFIS code description**	120	X	No	No

In this field the numeric code of field 450 is described in full.

e.g.: Entomology - Physiology, biochemistry, biophysics

511	**Date of Original Entry**	8	N	No	No

Date of the original entry in the form YYYYMMDD

e.g.: 19940129

512	**Last Update**	8	N	No	No

Date of the last update, in the form YYYYMMDD

e.g.: 19940210

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*
513	**Keyboarder**	60	X	No	No

Name of the person filling in record, in form first initial and surname

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

e.g.: T Okinawa

600	**Department Name**	100	X	No	No

The name of the department in its original language

e.g.: Service de Documentation

601	**Sort Code**	30	X	No	No

This is a code to link records together. It will be unique to each subsection of the main organization, or to each organization, depending on whether subsections are entered as separate records or not. The Sort Code can be of the form ISO Country Code/city or town/organization, e.g. KE/MOMBASA/KMFRI for the organization, KE/MOMBASA/KMFRIA for the first department, KE/MOMBASA/KMFRIB for the second department etc., or a simpler solution would be K/M/K, using the same elements, but ensuring that each sort code is unique.

602	**Date of Creation**	8	N	No	No

The date of creation of the department, in the form YYYYMMDD

e.g.: 19970401

605	**Department Phone**	80	X	Yes	No

The department phone number(s), in the international format, i.e. country code, area code, number. Each number will be separated by a percentage (%) sign

e.g.: 33-1-40683433

606	**Department Fax**	80	X	Yes	No

The department fax number, in the international format, ie. country code, area code, number. Each number will be separated by a percentage (%) sign

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

e.g.: 38-90-670984

607 Internet Document Transmission Address 80 X Yes No

The address used to transmit documents over the Internet, e.g. using the Ariel software. Each address will be separated by a percentage (%) sign

e.g.: Ariel: 165.95.51.75%sambuca@chanel.edu

608 E-Mail 80 X Yes No

The E-mail address(es), each in the form of E-mail Network, followed by semicolon and three spaces, followed by the Address, and each address separated by a percentage (%) sign

e.g.: compuserve; oceanis@compuserve.com

609 URL 80 X Yes No

The URL (Uniform Resource Locator) address(es) of the home page(s) of the organization=s library, and each address separated by a percentage (%) sign

e.g.: http://www1.npm.ac.uk/library/

610 Name 60 X No No

The name of the individual member of staff

e.g.: Murillo

611 Other Names 80 X No No

The other names of the individual

e.g.: Eduardo T.

612 Title 40 X Yes No

The title(s) of the individual. Separate each title by a percentage (%) sign

eg.: Ms%Dr

Tag	*Name*	*Length*	*Field Type*	*Repeatable*	*Subfields*
613	**Function**	60	X	Yes	No

The function(s) of the individual. Separate each function by a percentage (%) sign

e.g.: Librarian%Systems Librarian

614	**Sex**	10	X	No	No

The sex of the individual

e.g.: Female

615	**Phone**	80	X	Yes	No

The phone number(s), in the international format, i.e. country code, area code, number. Otherwise extension number or both. Separate each phone number with a percentage (%) sign

e.g.: 324-2-520005%324-2-520000 ext. 234

616	**Fax**	80	X	Yes	No

The fax number(s), in the international format, i.e. country code, area code, number. Separate different numbers with a percentage (%) sign

e.g.: 324-2-564673

617	**E-Mail**	80	X	Yes	No

The E-mail address(es), each in the form of E-mail Network, followed by semicolon and three spaces, followed by the Address, and each address separated by a percentage (%) sign

e.g.: greenet; tlincoln@greenet.com

618	**URL**	80	X	Yes	No

The URL (Uniform Resource Locator) address(es) of the home page(s) of the individual, and each address separated by a percentage (%) sign

e.g.: http://www1.npm.ac.uk/nmbl/dsm/

619	**Sort Code**	30	X	No	No

This is a code to link records together. It will be unique to each subsection of the main organization, or to each organization, depending on whether subsections are entered as separate records or not. The Sort Code

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

can be of the form ISO Country Code/city or town/organization, e.g. KE/MOMBASA/KMFRI for the organization, KE/MOMBASA/KMFRIA for the first department, KE/MOMBASA/KMFRIB for the second department etc., or a simpler solution would be K/M/K, using the same elements, but ensuring that each sort code is unique.

620 Collection Description 500 X Yes No

A free-text description of the library. Paragraphs can be separated by a percentage (%) sign

e.g.: The library is the largest in the country covering the subject of underwater technology, and contains an unrivalled collection of historical material, from the earliest submersibles onwards. Recent additions include the personal library of Nedoba Assiki.

621 Serial Titles (Current) 20 X No No

The number of current serial titles received by the library

e.g.: 4250

622 Books/Monographs 20 X No No

The number of books and monographs in the collection

e.g.: 16000

623 Reports 20 X No No

The number of reports in the collection

e.g.: 74000

624 Reprints 20 X No No

The number of reprints of papers in the collection

e.g.: 23000

625 Expedition Reports 20 X No No

The number of expedition and cruise report series in the collection

e.g.: 145 series

626 Atlases 20 X No No

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

The number of atlases in the collection

e.g.: 334

627	**Maps and Charts**	20	X	No	No

The number of maps and charts in the collection
e.g.: 2046

628	**Theses**	20	X	No	No

The number of Ph.D and M.Sc theses in the collection

e.g.: 5100

629	**Microfiches**	20	X	No	No

The number of microfiche in the collection

e.g.: 4500

630	**Microfilms**	20	X	No	No

The number of microfilms in the collection

e.g.: 545

631	**Audio Material**	160	X	No	No

A brief description of the audio material in the collection

e.g.: A collection of tapes of whale, dolphin, seals and other marine mammal sounds

632	**Video Material**	160	X	No	No

A brief description of the video material in the collection

e.g.: the collection includes videos demonstrating tank and laboratory tests carried out on undulating oceanographic recorders

633	**Other Media**	160	X	No	No

A brief description of the other media in the collection

e.g.: The collection contains computer disks of scientific data collected off the coast of Chile during a

Tag	*Name*	*Length*	*Field Type*	*Repeatable*	*Subfields*

number of oceanographic cruises carried out between 1965 and 1984

634 Archives 500 X Yes No

A brief description of the material held in the archive. Paragraphs can be separated by a percentage (%) sign

e.g.: The archive contains notebooks, papers, letters and other documents from scientists who worked at the laboratory during the years 1928 to 1946

635 Illustrations 500 X Yes No

A brief description of the illustrations held in the collection. Paragraphs can be separated by a percentage (%) sign

e.g.: The archive contains photographs, illustrations, drawings and paintings prepared by scientists working on the coastline of Antarctica during the early 1900=s

636 Special Collections/Facilities 500 X Yes No

A brief description of the special collections and facilities. Paragraphs can be separated by a percentage (%) sign

e.g.: Special collections include the libraries of the following scientists: G D Smears, F R Antonucci, and S P Chen%Special facilities include microfiche production and copying

637 Union Lists 160 X No No

A brief description of the union lists prepared and held

e.g.: A union list has been prepared of the holdings for all libraries in the city

638 Acquisition Policy 160 X No No

A brief description of the acquisition policy of the library

e.g.: The library tries to obtain all marine science publications for the Ukraine, and is a depository library for FAO and IOC publications

640 Classification System 20 X No No

The name of the library classification system

e.g.: Universal Decimal Classification (UDC)

641 Card Catalogues 160 X Yes No

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

A brief description of what card catalogues have been created, each separated by a percentage (%) sign

e.g: author%subject%title%geographic%book

642 Online Catalogues 160 X Yes No

A brief description of what online catalogues have been created, each separated by a percentage (%) sign

e.g.: author%subject%title%serial titles%maps

643 Databases/CD-ROMs 160 X Yes No

A description of unique databases and CD-ROMs to which access is provided, each separated by a percentage (%) sign

e.g.: EURASLIC Directory Database%ECDIN CD-ROM

644 Network Participation 160 X Yes No

Details of the library/information networks in which the library is involved, each separated by a percentage (%) sign

e.g.: IAMSLIC%Cyamus%EBLIDA

645 Other Services 500 X Yes No

A description of any other services that are provided. Paragraphs in the text may be separated by a percentage (%) sign

e.g.: translation service for documents from Chinese, Russian and Spanish to English%data extraction for toxic chemicals%contract preparation of bibliographies and directories

646 Software 160 X Yes No

A brief description of any library software that is used, each separated by a percentage (%) sign

e.g.: Reference Manager%CDS/ISIS%Access

650 Access (internal) 160 X No No

A description of access for staff and those resident in the organization, and any restrictions

e.g.: open to staff and long-term visitors 24 hours a day

651 Access (external) 160 X No No

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

A description of external use of the library, and any restrictions

e.g.: open to research scientists by appointment; not open to the public

652 Opening Hours 500 X Yes No

A description of the hours during which the library is open. Paragraphs in the text may be separated by a percentage (%) sign

e.g.: Term time: open Mondays - Fridays, 0900 - 1700 hrs, Saturdays, 1000 - 1600 hrs%Vacations: open Mondays - Fridays, 0900 - 1700 hrs only%closed for Bank Holidays

653 Loans/Charges 160 X Yes No

A description of any conditions for loans, together with the costs, each category separated by a percentage (%) sign

e.g.: internal loans without charges or restrictions%external loans for three weeks free of charge to libraries with reciprocal arrangements, otherwise at $5 per loan

654 Photocopies/Charges 160 X Yes No

A description of any conditions for photocopies, together with the costs, each category separated by a percentage (%) sign

e.g.: user copying: 1 franc per page, on completion of a copyright declaration%external copies provided at 3 francs per page, again on completion of a copyright declaration

660 World Wide Web 160 X Yes No

The address(es) of the library=s Web page(s), with a brief description of the contents, each address separated by a percentage (%) sign

e.g.: http://www.csir.lr/library information on the library and its collection%
http://www.csir.lr/library/services information on the library=s services to internal and external users

661 Gopher 160 X Yes No

The address(es) and a brief description of the options available, each separated by a percentage (%) sign

e.g.: http://gopher.metronet.com:70/healthinfo

662 Telnet 160 X Yes No

The address(es) of the library=s computer(s), to enable users to log onto it/them for a Telnet session. Each address will either be in the form of a name or a series of numbers. Each will be separated by a percentage (%) sign

Tag	*Name*	*Length*	*Field Type*	*Rep-eatable*	*Subfields*

e.g.: infoslug.ucsc.edu%128.114.143.25

663 FTP 160 X Yes No

The address of the library=s computer(s), to enable users to transfer files to or from the library=s computers. Each address will either be in the form of a name or a series of numbers. Each will be separated by a percentage (%) sign

e.g.: infoslug.ucsc.edu%128.114.143.25

664 Dialup 160 X Yes No

Online access via a modem and telephone. The telephone number(s) will be given, but further information will be necessary on the type of terminal emulation, parity, bit length, duplex, speed, etc. Each will be separated by a percentage (%) sign

e.g.: 1-847-491-3070%1-847-467-1039

670 Organization B Printed 240 X Yes No

Printed publications produced by the organization, each separated by a percentage (%) sign

e.g.: Salmon Farming%Annual Report Caracas Marine Institute

671 Organization B Electronic 240 X Yes No

Publications in electronic form produced by the organization. Each publication will include the web address. Each publication will be separated by a percentage sign (%)

e.g.: Anuario Instituto del Mar de Plata (http://www.mardelplata.br)%Ciencias naturales (http://www.ciencias.naturales.com)

672 Department B Printed 240 X Yes No

Printed publications produced by the department, each separated by a percentage (%) sign.

e.g.: Marine Pollution Research Titles%Literatuurinformatie verkeer en vervoer

673 Department B Electronic 240 X Yes No

Publications in electronic form produced by the department. Each publication will include the web address. Each publication will be separated by a percentage sign (%)

e.g.: Maritime Information Review (http://www.library.tudelft.nl/BTUD/eng/mic-e.htm)%Offshore Engineering Information Bulletin (http://www.hw.ac.uk/oeib.htm)

Tag	*Name*	*Length*	*Field Type*	*Repeatable*	*Subfields*
692	**ASFIS Codes**	500	X	Yes	No

The ASFIS Codes describing the activities of the department , separated by a percentage sign (%). A full list of ASFIS codes is included as Annex II

e.g.: 1521%1820

693	**Environment**	60	X	Yes	No

The environment in which the department is working, i.e. brackish, fresh, marine, separated by a percentage sign (%)

e.g.: fresh%brackish

699	**Notes**	500	X	No	No

Any additional information about the department

900 All the 900's are for locally defined fields, to cater for specific needs.

8. IMPLEMENTATION OF THE STANDARD LIBRARY STRUCTURE USING MICRO CDS/ISIS

In view of the use of the reference function linking the individual, institutional and ASFIS records, it may be rather difficult for the novice user to define the necessary FDT, FST and PFT files. We therefore provide these in this manual. We thank Dr. Egbert De Smet (University of Antwerp, Antwerp, Belgium) for helping with the development of these files.

8.1 FDT FILE FOR THE STANDARD LIBRARY DIRECTORY RECORD STRUCTURE

```
W:LIBDI ASFIS
F:LIBDIRLIBSOR
S:LIBDIR
***

Record Identifier                          1 20 0 0
Header  2 20 0 0
Sort Code                                  3 30 0 0
Completeness of Record                     21 30 0 0
Type of Factual Information                62 3 0 0
Organization Name (Original)              100 100 0 0
Organization Name (English)               101 100 0 0
Acronym                                   105 30 0 0
Affiliation                               110 100 0 0
```

Date of Creation 111 8 2 0
Number/Letter 120 10 0 0
Street 121 60 0 0
Building 122 60 0 0
Floor 123 10 0 0
PO Box 124 30 0 0
Postal Code 130 20 0 0
Town/City 131 60 0 0
Postal Code 132 20 0 0
Postal Code 140 20 0 0
County/State/Province 141 60 0 0
Postal Code 142 20 0 0
Postal Code 150 20 0 0
Nation 151 60 0 0
Postal Code 152 20 0 0
Postal Code 160 20 0 0
Country (Original) 161 60 0 0
Postal Code 162 20 0 0
Country (English) 163 60 0 0
ISO Country Code 164 2 0 0
Head of Organization (Surname) 170 60 0 0
Other Names 171 80 0 0
Title 172 40 0 1
Position in Organisation 173 60 0 1
Phone 180 80 0 1
Fax 181 80 0 1
Telex 182 80 0 1
Telegram 183 80 0 0
E-Mail 184 80 0 1
URL 185 160 0 1
Description of Activities 190 500 0 1
Subjects 191 500 0 1
ASFIS Codes 192 500 0 1
Environment 193 60 0 1
Notes 199 500 0 0
ASFIS Code 450 4 0 0
ASFIS Code Description 455 120 0 0
Date of Original Entry 511 8 2 0
Last Update 512 8 2 0
Keyboarder 513 60 0 0
Department Name 600 100 0 0
Sort Code 601 30 0 0
Date of Creation 602 8 0 0
Department Phone 605 80 0 1
Department Fax 606 80 0 1
Internet Document Transmission Address 607 80 0 1
E-Mail 608 80 0 1
URL 609 80 0 1
Name 610 60 0 0
Other Names 611 80 0 0
Title 612 40 0 1
Function 613 60 0 1
Sex 614 10 0 0
Phone 615 80 0 1
Fax 616 80 0 1
E-Mail 617 80 0 1

URL 618 80 0 1
Sort Code 619 30 0 0
Collection Description 620 500 0 1
Serial Titles (Current) 621 20 0 0
Books/Monographs 622 20 0 0
Reports 623 20 0 0
Reprints 624 20 0 0
Expedition Reports 625 20 0 0
Atlases 626 20 0 0
Maps and Charts 627 20 0 0
Theses 628 20 0 0
Microfiches 629 20 0 0
Microfilms 630 20 0 0
Audio Material 631 160 0 0
Video Material 632 160 0 0
Other Media 633 160 0 0
Archives 634 500 0 1
Illustrations 635 500 0 1
Special Collections/Facilities 636 500 0 1
Union Lists 637 160 0 0
Acquisition Policy 638 160 0 0
Classification System 640 20 0 0
Card Catalogues 641 160 0 1
Online Catalogues 642 160 0 1
Databases/CD-ROMs 643 160 0 1
Network Participation 644 160 0 1
Other Services 645 500 0 1
Software 646 160 0 1
Access (internal) 650 160 0 0
Access (external) 651 160 0 0
Opening Hours 652 500 0 1
Loans/Charges 653 160 0 1
Photocopies/Charges 654 160 0 1
World Wide Web (WWW) 660 160 0 1
Gopher 661 160 0 1
Telnet 662 160 0 1
FTP 663 160 0 1
Dialup 664 160 0 1
Organization B printed 670 240 0 1
Organization B electronic 671 240 0 1
Department B printed 672 240 0 1
Department B electronic 673 240 0 1
ASFIS Codes 692 500 0 1
Environment 693 60 0 1
Notes 699 500 0 0

8.2 FST FILE FOR THE STANDARD LIBRARY DIRECTORY RECORD STRUCTURE

```
1 4 v1
2 4 v2
3 4 v3
3 0 If p(v100) Then |+|v3 Fi
21 4 v21
```

```
62 4 v62
100 1 v100
100 4 v100
101 1 v101
101 4 v101
105 0 v105
110 4 v110
131 4 v131
141 4 v141
151 4 v151
161 4 v161
163 4 v163
164 4 v164
170 0 v170|, |v171
172 0 v172
172 4 v172
182 4 v182
184 4 v184
185 4 v185
190 4 mpl,(v190|%|)
191 0 mpl,(v191|%|)
192 1 mpl,(|AC=|v192|%|)
193 0 (v193|%|)
450 0 |*|v450
600 0 v600
600 4 v600
601 4 v601
617 4 v617
618 4 v618
619 4 v619
620 4 mpl,(v620|%|)
631 4 mpl,(v631|%|)
632 4 mpl,(v632|%|)
633 4 mpl,(v633|%|)
634 4 mpl,(v634|%|)
635 4 mpl,(v635|%|)
636 4 mpl,(v636|%|)
640 4 v640
641 0 mpl,(v641|%|)
642 0 mpl,(v642|%|)
643 4 mpl,(v643|%|)
644 0 mpl,(v644|%|)
645 4 mpl,(v645|%|)
646 0 mpl,(v646|%|)
660 0 mpl,(v660|%|)
670 4 mpl,(v670|%|)
671 4 mpl,(v671|%|)
672 4 mpl,(v672|%|)
673 4 mpl,(v673|%|)
692 0 mpl,(|AC=|v692|%|)
693 0 (v693|%|)
```

8.3 PFT FILE FOR STANDARD LIBRARY DIRECTORY RECORD STRUCTURE

mfn(4)/If p(v100) Then "ORGANIZATION: "v100," ("v101")"," ["v105"]"/"AFFILIATION: "v110/"ADDRESS: "v120," "v121,/v122,", "v123/v124/v130," "v131," "v132/v140," "v141," "v142/v150," "v151," "v152/v160," ("v163")"," "v161," "v162/"ISO CODE: "v164/#"HEAD OF ORGANIZATION: "v172" ",v171" ",v170," ("v173")"/#"Phone: "v180|; |/"Fax: "v181|; |/"Telex: "v182|; |/"Telegram: "v183/"E-mail: "v184|; |/@URL: Av185|; |/#" DESCRIPTION OF ACTIVITIES: "v190|; |,/("SUBJECTS: "v191+|; |),/("ASFIS CODES: "v192(13,13) x1 REF(L(|*|v192),|(|v455|);|)/),/("ENVIRONMENT: "v193+|; |)/"NOTES: "v199/## Else ADEPARTMENT: @v600,/Ref(1'>>=v601,|ORGANIZATION: v100,|(|v101,|)|,/|ADDRESS: A|v120 |, |v121|, |v122|, |v123|, |v124, |v130|, |v131|, |v132|, |v161,/@Date of Creation: Av602/@Department Phone: Av605|; |,@ Department Fax: Av606|; |/@Internet Document Transmission Address: Av607|; |/@E-Mail: Av608; |; |/@URL: Av609|; |/#@Staff: A(v610,x1,v611,x1,v612,x1,v613,x1,v614#%)@Collection Description: Av620|; |/@Serial Titles (Current): Av621/@Books/Monographs: Av622/@Reports: Av623/Reprints: Av624/@Expedition Reports: Av625/@Atlases: Av626/@Maps and Charts: Av627/@Theses: Av628/@Microfiches: Av629/@Microfilms: Av630/@Audio Material: Av631/@Video Material: Av632/Other Media: Av633/@Archives: Av634|; |/@Illustrations: Av635|; |/@Special Collections/Facilities: Av636|; |/@Union Lists: Av637/@Acquisition Policy: Av638/@Classification System: Av640/@Card Catalogues: Av641|; |/@Online Catalogues: Av642|; |/@Databases/CD-ROMs: Av643|;|/@Network Participation: Av644|; |/@Other Services: Av645|; |/@Software: Av646|; |/@Access (internal): Av650/@Access (external): Av651/@Opening Hours: Av652|; |/@Loans/Charges: Av653|; |/@Photocopies/Charges: Av654|; |/@World Wide Web: Av660|; |/@Gopher: Av661|; |/@Telnet: Av662|; |/@FTP: Av663|; |/@Dialup: Av664|; |/@Organization - Printed: Av670|; |/@Organization - Electronic: Av671|; |/@Department - Printed: Av672|; |/@Department - Electronic: Av673|; |/(AASFIS CODES: Av693(13,13)x1 REF(L(1<<v692),|(|v455|);|)/)/(AENVIRONMENT: Av693+|; |),/@NOTES: Av699/#FI@Date of Original Entry: Av511/@Last Update: Av512/@Keyboarder: Av513###

REFERENCE

Moulder, D.S.; McFadden, C.; Pissierssens, P.; and Reyniers, P.; 1994
Standard directory record structure for organizations, individuals and their research interests.
IOC Manuals and Guides No.30, Vol. 3, 22 pp + annexes.

The Author

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(To mid-January 1998)
Plymouth Marine Laboratory (PML)
Plymouth, UK

(From mid-January 1998)
World Maritime University (WMU)
Malmö, Sweden

ANNEX I

ISO-3166 2-LETTER COUNTRY CODES
(1993)

This list does not constitute an official list of names of countries or other political entities. The name of the entity is given in its short form in English.

Afghanistan	AF	Chad	TD
Albania	AL	Chile	CL
Algeria	DZ	China	CN
American Samoa	AS	Christmas Island	CX
Andorra	AD	Cocos (Keeling) Islands	CC
Angola	AO	Colombia	CO
Anguilla	AI	Comoros	KM
Antarctica	AQ	Congo	CG
Antigua and Barbuda	AG	Cook Islands	CK
Argentina	AR	Costa Rica	CR
Armenia	AM	Cote d'Ivoire	CI
Aruba	AW	Croatia	HR
Australia	AU	Cuba	CU
Austria	AT	Cyprus	CY
Azerbaijan	AZ	Czech Republic	CZ
Bahamas	BS	Denmark	DK
Bahrain	BH	Djibouti	DJ
Bangladesh	BD	Dominica	DM
Barbados	BB	Dominican Republic	DO
Belarus	BY	East Timor	TP
Belgium	BE	Ecuador	EC
Belize	BZ	Egypt	EG
Benin	BJ	El Salvador	SV
Bermuda	BM	Equatorial Guinea	GQ
Bhutan	BT	Eritrea	ER
Bolivia	BO	Estonia	EE
Bosnia and Herzegovina	BA	Ethiopia	ET
Botswana	BW	Falkland Islands (Malvinas)	FK
Bouvet Island	BV	Faroe Islands	FO
Brazil	BR	Fiji	FJ
British Indian Ocean Territory	IO	Finland	FI
Brunei Darussalam	BN	France	FR
Bulgaria	BG	France, Metropolitan	FX
Burkina Faso	BF	French Guiana	GF
Burundi	BI	French Polynesia	PF
Cambodia	KH	French Southern Territories	TF
Cameroon	CM	Gabon	GA
Canada	CA	Gambia	GM
Cape Verde	CV	Georgia	GE
Cayman Islands	KY	Germany, Federal Republic	DE
Central African Republic	CF	Ghana	GH

Gibraltar	GI	Malta	MT
Greece	GR	Marshall Islands	MH
Greenland	GL	Martinique	MQ
Grenada	GD	Mauritania	MR
Guadeloupe	GP	Mauritius	MU
Guam	GU	Mayotte	YT
Guatemala	GT	Mexico	MX
Guinea	GN	Micronesia (Federated States of)	FM
Guinea-Bissau	GW	Moldova, Republic of	MD
Guyana	GY	Monaco	MC
Haiti	HT	Mongolia	MN
Heard and McDonald Islands	HM	Montserrat	MS
Honduras	HN	Morocco	MA
Hong Kong	HK	Mozambique	MZ
Hungary	HU	Myanmar	MM
Iceland	IS	Namibia	NA
India	IN	Nauru	NR
Indonesia	ID	Nepal	NP
Iran (Islamic Republic of)	IR	Netherlands	NL
Iraq	IQ	Netherlands Antilles	AN
Ireland	IE	New Caledonia	NC
Israel	IL	New Zealand	NZ
Italy	IT	Nicaragua	NI
Jamaica	JM	Niger	NE
Japan	JP	Nigeria	NG
Jordan	JO	Niue	NU
Kazakhstan	KZ	Norfolk Island	NF
Kenya	KE	Northern Mariana Islands	MP
Kiribati	KI	Norway	NO
Korea, Democratic Republic	KP	Oman	OM
Korea, Republic of	KR	Pakistan	PK
Kuwait	KW	Palau	PW
Kygyzstan	KG	Panama	PA
Lao People's Democratic Republic	LA	Papua New Guinea	PG
Latvia	LV	Paraguay	PY
Lebanon	LB	Peru	PE
Lesotho	LS	Philippines	PH
Liberia	LR	Pitcairn	PN
Libyan Arab Jamahiriya	LY	Poland	PL
Liechtenstein	LI	Portugal	PT
Lithuania	LT	Puerto Rico	PR
Luxembourg	LU	Qatar	QA
Macau	MO	Reunion	RE
Macedonia, The former Yugoslav	MK	Romania	RO
Republic of Madagascar	MG	Russian Federation	RU
Malawi	MW	Rwanda	RW
Malaysia	MY	Saint Helena	SH
Maldives	MV	Saint Kitts and Nevis	KN
Mali	ML	Saint Lucia	LC

Saint Pierre and Miquelon	PM
Saint Vincent and the Grenadines	VC
Samoa	WS
San Marino	SM
Sao Tome and Principe	ST
Saudi Arabia	SA
Senegal	SN
Seychelles	SC
Sierra Leone	SL
Singapore	SG
Slovakia	SK
Solomon Islands	SB
Somalia	SO
South Africa	ZA
South Georgia and the South Sandwich Islands	GS
Spain	ES
Sri Lanka	LK
Sudan	SD
Suriname	SR
Svalbard and Jan Mayen	SJ
Swaziland	SZ
Sweden	SE
Switzerland	CH
Syrian Arab Republic	SY
Taiwan, Province of China	TW
Tajikistan	TJ
Tanzania	TZ
Thailand	TH
Togo	TG
Tokelau	TK
Tonga	TO
Trinidad and Tobago	TT
Tunisia	TN
Turkey	TR
Turkmenistan	TM
Turks and Caicos Islands	TC
Tuvalu	TV
Uganda	UG
Ukraine	UA
United Arab Emirates	AE
United Kingdom	GB
United States	US
United States Minor Outlying Islands	UM
Uruguay	UY
Uzbekistan	UZ
Vanuatu	VU
Vatican City State (Holy See)	VA
Venezuela	VE
Viet Nam	VN
Virgin Islands (British)	VG
Virgin Islands (US)	VI
Wallis and Futuna Islands	WF
Western Sahara	EH
Yemen	YE
Yugoslavia	YU
Zaire	ZR
Zambia	ZM
Zimbabwe	ZW

ANNEX II

LIST OF ASFIS CODES

ASFA-1 SUBJECT CATEGORIES

GENERAL ASPECTS

1101 General works
1102 Institutes and organizations
1103 Information services
1104 Personal
1105 Research programmes, expeditions and vessels
1106 Conferences and other meetings
1107 History and development
1108 Education
1109 Books, atlases and charts
1110 Translations

1121 LAW, POLICY, ECONOMICS AND SOCIAL SCIENCES

BIOLOGY

BIOLOGY: GENERAL

1181 General
1182 Methods and instruments
1183 Taxonomy and morphology
1184 Reproduction and development
1185 Genetics and evolution
1186 Physiology, biochemistry, biophysics
1187 Palaeontology

MICROBIOLOGY

1201 General
1202 Geographic distribution
1203 Taxonomy and morphology
1204 Reproduction and development
1205 Genetics and evolution
1206 Physiology, biochemistry, biophysics

BOTANY

1221 General
1222 Geographic distribution
1223 Taxonomy and morphology
1224 Reproduction and development
1225 Genetics and evolution
1226 Physiology, biochemistry, biophysics

INVERTEBRATE BIOLOGY: GENERAL
(excluding Molluscs, Crustaceans, Insects)

1241 General
1242 Geographic distribution
1243 Taxonomy and morphology
1244 Reproduction and development
1245 Genetics and evolution
1246 Physiology, biochemistry, biophysics

MALACOLOGY

1261 General
1262 Geographic distribution
1263 Taxonomy and morphology
1264 Reproduction and development
1265 Genetics and evolution
1266 Physiology, biochemistry, biophysics

CARCINOLOGY

1281 General
1282 Geographic distribution
1283 Taxonomy and morphology
1284 Reproduction and development
1285 Genetics and evolution
1286 Physiology, biochemistry, biophysics

ENTOMOLOGY

1301 General
1302 Geographic distribution
1303 Taxonomy and morphology
1304 Reproduction and development
1305 Genetics and evolution
1306 Physiology, biochemistry, biophysics

CHORDATE BIOLOGY: GENERAL
(excluding Fish, Birds, Mammals)

1321 General
1322 Geographic distribution
1323 Taxonomy and morphology
1324 Reproduction and development
1325 Genetics and evolution
1326 Physiology, biochemistry, biophysics

ICHTHYOLOGY

1341 General
1342 Geographic distribution
1343 Taxonomy and morphology
1344 Reproduction and development
1345 Genetics and evolution
1346 Physiology, biochemistry, biophysics

ORNITHOLOGY

1361 General
1362 Geographic distribution
1363 Taxonomy and morphology
1364 Reproduction and development
1365 Genetics and evolution
1366 Physiology, biochemistry, biophysics

MAMMALOGY

1371 General
1372 Geographic distribution
1373 Taxonomy and morphology
1374 Reproduction and development
1375 Genetics and evolution
1376 Physiology, biochemistry, biophysics

ECOLOGY AND ECOSYSTEMS

AQUATIC ECOLOGY

1381 General
1382 Ecological techniques and apparatus
1383 Biogeography and biogeographic regions

AUTECOLOGY

1421 Migrations and rhythms
1422 Environmental effects
1423 Behavior
1424 Age and growth
1425 Nutrition and feeding habits

POPULATION STUDIES

1441 Population structure
1442 Population dynamics
1443 Population genetics

AQUATIC COMMUNITIES

1461 Plankton
1462 Benthos
1463 Habitat community studies
1464 Other aquatic community studies

PRODUCTIVITY, ECOSYSTEMS, SPECIES INTERACTIONS

1481 Productivity
1482 Ecosystems and energetics
1483 Species interactions: general
1484 Species interactions: parasites and diseases
1485 Species interactions: pests and control

FOULING AND BORING

1541 Biology of fouling and boring organisms
1542 Prevention and control

FISHERIES

PRACTICAL ASPECTS OF FISHERIES

1561 General
1562 Fishing vessels and harbours
1563 Fishing gear and methods
1564 Instruments, tools, equipment
1565 Policy, legislation and sociology
1566 Fishery charts, grounds and water areas
1567 Fishery oceanography and limnology

AQUACULTURE

1581 General
1582 Fish culture
1583 Shellfish culture
1584 Culture of other aquatic animals
1585 Plant culture
1586 Aquaria

FISHABLE STOCKS

1601 General
1602 Surveying and prospecting
1603 Fishery statistics and sampling
1604 Stock assessment and management
1605 Sport fishing

AQUATIC PRODUCTS AND THEIR UTILIZATION

1621 General
1622 Primary products
1623 Processing methods, instruments and factories
1624 Secondary products
1625 Non-edible products
1626 Food technology
1627 Food quality and standards

MARKETING AND ECONOMICS OF AQUATIC PRODUCTS

1641 General
1642 Storage, transport and packing
1643 Marketing
1644 Economics
1645 Commodity and trade statistics

ASFA-2 SUBJECT CATEGORIES

GENERAL ASPECTS

2101 General works
2102 Institutes and organizations
2103 Information services
2104 Personal
2105 Research programmes and expeditions
2106 Conferences and other meetings
2107 History and development
2108 Education
2109 Books, atlases and charts
2110 Translations

LAW, POLICY, ECONOMICS AND SOCIAL SCIENCES

2121 General
2122 Legislation
2123 Conservation
2124 Coastal zone management
2125 Recreation
2126 Sociology
2127 General papers on resources

THE PHYSICAL ENVIRONMENT

DESCRIPTIVE OCEANOGRAPHY AND LIMNOLOGY

2141 General
2142 Methods and instruments
2144 Regional studies, expeditions and data reports
2146 TSD distribution, water masses and circulation
2148 Palaeo-studies
2150 Ice

DYNAMICAL OCEANOGRAPHY AND LIMNOLOGY

2161 General
2162 Methods and instruments
2163 Air-water boundary layer
2164 Ocean circulation and currents
2165 Benthic boundary layer
2166 Internal waves and microstructure
2167 Tides, surges and sea level
2168 Wind waves
2169 Fluid mechanics
2170 Nearshore dynamics
2171 Dynamics of lakes and rivers

CHEMISTRY AND GEOCHEMISTRY

2181 General
2182 Methods and instruments
2183 Physics and chemistry
2184 Composition of water
2185 Organic compounds
2186 Chemistry of suspended matter
2187 Chemistry of sediments
2188 Atmospheric chemistry

UNDERWATER ACOUSTICS

2201 General
2202 Methods and instruments
2203 Propagation of sound
2204 Reverberation
2205 Noise and bioacoustics

UNDERWATER OPTICS

2221 General
2222 Methods and instruments
2223 Optical properties
2225 Underwater viewing

MARINE METEOROLOGY AND CLIMATOLOGY

2241 General
2242 Observations and measurements at sea
2243 Structure, mechanics and thermodynamics
2244 Air-sea coupling
2245 Ship routing and icing

GEOLOGY AND GEOPHYSICS

2261 General
2262 Methods and instruments
2263 Topography and morphology
2264 Sediments and sedimentation
2265 Sedimentary structures and stratigraphy
2266 Tectonics and crustal structure
2267 Gravity and geodesy
2268 Heat flow
2269 Geomagnetism
2270 Seismology
2271 Coastal morphology
2272 Petrology and chemistry of rocks
2273 Palaeontology
2274 Coral reefs

TECHNOLOGY AND ENGINEERING

MARINE TECHNOLOGY

2281 General
2282 Materials technology, corrosion, fouling and boring
2283 Soil mechanics
2284 Hydrodynamics, wave, current and ice forces

VESSELS, UNDERWATER VEHICLES AND BUOYS

2300 General
2301 Surface vehicles
2302 Underwater vehicles
2303 Buoys and buoy systems

OFFSHORE AND COASTAL STRUCTURES

2321 General
2322 Drilling and production rigs
2323 Storage systems and tanker terminals
2324 Artificial islands
2325 Pipelines
2326 Sea floor installations
2327 Coast defences and harbour works

MAN-IN-THE-SEA AND DIVING

2341 General
2342 Physiology and medicine
2343 Diving systems
2344 Life support
2345 Pressure chambers
2346 Dangerous organisms

SUPPORT SERVICES, TECHNIQUES AND EQUIPMENT

2381 Cables
2382 Communication telemetry
2383 Data acquisition and processing
2384 Dredging
2385 Hydrographic survey and cartography
2386 Mooring and dynamic positioning
2387 Navigation
2388 Ocean operations and safety
2389 Power systems
2390 Search and salvage
2391 Tools, rigging and deck machinery
2392 Warning services against catastrophes
2393 Remote geosensing

RESOURCES AND COMMERCE

RESOURCES

2401 General
2402 Freshwater from the sea
2403 Chemicals from sea water
2404 Minerals
2405 Oil and gas
2406 Energy from the sea

COMMERCE, TRADE AND ECONOMICS

2421 Marketing and economics: General
2422 Storage and transport
2423 Marketing
2424 Applied economics
2425 Commodity and trade statistics

ASFA-3 SUBJECT CATEGORIES

POLLUTION

3501 General
3502 Methods and instruments
3503 Characteristics, behaviour and fate
3504 Effects on organisms
3505 Prevention and control

ENVIRONMENTAL CHANGES, CONSERVATION, PUBLIC HEALTH

3521 Mechanical and natural changes
3522 Protective measures and control
3523 Conservation, wildlife management and recreation
3524 Public health, medicine, dangerous organisms