

MERMAID

EU Project No: IST-1999-10637

Metadata Specification

Deliverable No: D3.1
(Rev 2)

JUNE 2001



Report Title:	MERMAID Metadata Specification
Customer:	European Commission, Directorate-General Information Society, IST Programme
BMT Report no:	13300/D/03.1
Deliverable nos:	D3.1
Report status:	Rev 2
Date:	June 2001
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Revision

Revision Number	Date	Author	Purpose of Revision
0	26/01/2001	Paul Taylor	Internal Draft
1	06/06/2001	Chris Little	Completion of pick-lists, and details
2	07/06/2001	Paul Taylor	Reformatting

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1. INTRODUCTION

The consortium decided that for this EU-funded research project, we should try to adopt an existing metadata structure from the multitude that are already in existence, rather than to design a new one from scratch. After compiling the project's requirements during the first phase (see WP2 deliverable; User Requirements Specification – D1), various metadata structures were investigated for their suitability. It was quickly decided that one in particular, the European Directory of Marine Environmental Data (EDMED) was the most suitable.

EDMED is a computer-searchable directory of data sets relating to the marine environment. It covers a wide range of disciplines including marine meteorology; physical, chemical and biological oceanography; sedimentology; marine biology and fisheries; environmental quality monitoring; coastal and estuarine studies; marine geology and geophysics etc. Data sets are catalogued in EDMED irrespective of their format (e.g. digital databases or files, analogue records, paper charts, hard-copy tabulations, geological samples, biological specimens etc.).

Although the directory is targeted primarily at datasets that can be made accessible to other users, encouragement is also given to holders of working datasets, or data of a confidential or restricted availability, to make their data known through EDMED.

EDMED was principally chosen because of its simplicity, flexibility and widespread use within Europe. In addition, it was decided that since EDMED is the basis for the Sea-search project (www.sea-search.net), which has been developed under another EU-funded initiative, that politically this was also the right choice.

The basic EDMED metadata structure will be adopted for use by MERMAID. As far as possible, the structure that will be supported will follow the existing EDMED format. However, there will need to be some amendments to incorporate features that the MERMAID Catalogue will require.

Fundamentally, metadata records will be updated automatically by the MERMAID system, rather than being collated by a national centre first. It will also be possible to complete records on-line, or to upload a file record(s) to the MERMAID Catalogue (providing it is in the correct format).

In addition, whereas most EDMED fields are free-text, and any field can be omitted, the MERMAID structure will enforce the format to be used and provide selectable pick-lists in some fields, and certain key fields will be compulsory to complete.

Where extensions have been made to EDMED, they have been, wherever possible, compatible with other well-established international metadata initiatives, such as Dublin Core and the NASA Directory Interchange Format.

2. LANGUAGES

It should be noted that MERMAID will support the 5 core languages of the project partners (English, French, Italian, Dutch, and Polish), and it will be possible for the user to select which of these languages the site should display. However, it will not be possible to translate the free-text descriptions of every record supplied into the 5 core languages. Only those fields that provide pick-lists can be translated. It will be possible for the data provider to complete the record in any language (not restricted to the five core languages), as long as only standard ASCII characters are used. However, these records will appear in the catalogue in the language as entered by the provider.

3. TECHNOLOGY

The metadata information supplied will be divided into 3 sections; the Data Providers Details, the Pricing Details, and the Data Description Details. There will therefore be 3 separate databases to store this information. The SQL server technology will be used for each of these databases, and XML will be used for the data exchange language.

The structure will be generically designed from the outset so that existing pick-lists can be extended, and additional sub-menus can be included, to allow the development and expansion of the structure in the future.

4. STRUCTURE

Free-text input fields will be replaced as much as possible with selectable pick-lists. In some cases, sub-menu pick-lists will be required in order to give a more organised, hierarchical structure. Where possible, only the first pick-list selection will be compulsory, with the additional sub-menus giving the provider the flexibility to attach more detailed information about the dataset if they so wish.

5. COMPATIBILITY

The new format must remain compatible with the existing EDMED structure, as well as all the other structures that EDMED is currently compliant with. Existing records provided in EDMED must not need to be re-entered, but should be portable into the MERMAID format.

6. METADATA DESCRIPTION FIELDS

6.1. MERMAID Section 1: Data Providers Details (EDMED PART A1 – Data Holding Centre)

This section to be completed only once by each Data Provider.

*NB. Those fields in **Bold** are amendments to the standard EDMED, and those in italics are optional. All fields not in Italics are compulsory. The pick-lists are numbered sequentially and detailed in the Appendix*

*CENTRE-NAME: (Free-text field up to 160 printable ASCII characters)
English version of the name

*CENTRE-HOST. (optional). (Free-text field up to 160 printable ASCII characters) Host country language name

*VISIT-ADDRESS: (separate free-text fields each up to 80 printable ASCII characters for the following:)

Centre/Organisation Name (Up to 160 printable ASCII characters)
Department Name
Building Name/Number
Street Name
Town/City
Region/County/State
Post/Zip-code
PostBox

Require the option to enter more than one address if this is appropriate (i.e if a Provider has more than one site).

*COUNTRY: (pick-list 1, up to 80 printable ASCII characters) The host country - one option selectable from list. See:
http://www.din.de/gremien/nas/nabd/iso3166ma/codlstp1/en_listp1.html

*LANGUAGE: (pick-list 2, up to 80 printable ASCII characters) The default language used for the free-text descriptions – one option selectable from list (the last option of the list to be ‘Other’ with a free-text field to complete). See:
<http://www.oasis-open.org/cover/iso639a.html>

*CENTRE-WEBSITE (optional). Free-text field up to 160 printable ASCII characters

*FTP-ADDRESS: (separate free-text fields, each consisting of up to 80 printable ASCII characters, for the following:)
Address
Userid
Password



- *DESCRIPTION (optional) – Free-text field, consisting of repeated fields of up to 80 printable ASCII characters, to give a brief description of the status, role and activities of the data holding centre.*
- *CURRENCY-DATE: fixed format ASCII text field (yyyy-mm-dd – or 3 pick-lists for day, month and year) - date last checked for accuracy (initially set to date first completed).
- *REVISION-DATE: fixed format ASCII text field (yyyy-mm-dd – or 3 pick-lists for day, month and year) - date last revised by author

6.2. MERMAID Section 1a: Data Provider's Contacts

(EDMED PART A2 – Data Contact(s) within Data Holding Centre)

This section to be completed separately for each contact point within the Data Holding Centre – if a single contact point is responsible for all datasets, then only one is required.

*CONTACT-NAME: (optional): (separate fields for the following:)

Title (pick-list 3, up to 80 printable ASCII characters) one option selectable

Surname (free-text field, up to 80 printable ASCII characters)

First Name(s) (free-text field, up to 80 printable ASCII characters)

*CONTACT-TITLE: free-text field, up to 80 printable ASCII characters, to give position or title of post (eg. BODC Enquiries Officer)

*CONTACT-ROLE: (pick-list 4, up to 80 printable ASCII characters) to give level of authorisation of contact to update records – one or more options selectable

*POST-ADDRESS: (separate fields as for VISIT-ADDRESS in PART A1)
- (to be completed only if different from VISIT-ADDRESS)

*PHONE: (fixed format field, up to 80 printable ASCII characters – international format)

*FAX: (fixed format field, up to 80 printable ASCII characters – international format)

*EMAIL (free-text field, up to 80 printable ASCII characters)

*CURRENCY-DATE fixed format ASCII text field (yyyy-mm-dd – or 3 pick-lists for day, month and year) - date last checked for accuracy (initially set to date first completed).

*REVISION-DATE: fixed format ASCII text field (yyyy-mm-dd – or 3 pick-lists for day, month and year) - date last revised by author

6.3. MERMAID Section 2: General Pricing Details

***DEFAULT-SUPPLY-MEDIUM:** (pick-list 5, up to 80 printable ASCII characters) The preferred/most common supply medium – one option selectable from list

***DEFAULT-SHIPPING-METHOD:** (pick-list 6, up to 80 printable ASCII characters) A list dependent on the choice made above (inappropriate options to be greyed out) to give the default delivery method – one option selectable from list

***OTHER-SUPPLY-MEDIUM:** (pick-list 5, up to 80 printable ASCII characters) to provide a list of all possible supply methods available – one or more options selectable from list.

***Supply-Costs:** (free-text field, up to 80 printable ASCII characters) – sub-menu of OTHER-SUPPLY-MEDIUM to give the supply-costs for each supply medium selected, (including handling cost and physical supply cost), i.e. the cost of a CD-ROM and the time spent to write a dataset on it). These values will be used as "default" values, and could be overridden for each specific dataset

***OTHER-SHIPPING-METHODS:** (pick-list 6, up to 80 printable ASCII characters) to provide a list of all delivery methods supported – one or more options selectable from list

***Shipping-Costs:** (free-text field, up to 80 printable ASCII characters) sub-menu of SHIPPING-METHODS to give the shipping cost for each shipping method defined. These values will be used as "default" values, and could be overridden for each specific dataset

***DISCOUNTED-CATEGORIES:** (pick-list 7, up to 80 printable ASCII characters) To select the 'Categories' of consumers that the Provider may be prepared to give some degree of a discount to – none, one or more selectable from list. The last option of the list will be 'FRIEND', so that the provider can specify those customers that they will be prepared to give a discount to. If FRIEND is selected, either a list of the MERMAID registered users will be presented, or (more likely) the provider will have to enter the details of the customer (i.e. the unique MERMAID User ID).

NB. That this is the discount default, which can be overridden for each dataset. More than one FRIEND should be selectable, and if no discounts are ever given, then not selecting any category will indicate this.

***Default-Category-Discount:** (free-text field, up to 80 printable ASCII characters) Sun-field of DISCOUNTED-CATEGORIES to give the default discount that each category will receive. This is only the default, and can be overridden for each dataset.



***DEFAULT-DISCOUNT-SUBSET: (free input, up to 80 printable ASCII characters, driven by an applet) – to give the default subset discount information, depending on the percentage of the dataset being purchased.**

6.4. MERMAID Section 3 : Dataset Description

(EDMED PART B – Dataset Description)

This section to be completed for each dataset available.

***DATASET-NAME:** (free-text field up to 160 printable ASCII characters) - informative name of dataset to enable consumer to anticipate the content of the dataset, and its spatial/temporal coverage.

***TIME-PERIOD:** (free-text field, up to 160 printable ASCII characters)
Description of the time coverage, to include duration, typical sampling interval, and any major temporal gaps. (optional).

***TIME-PERIOD-START:** (fixed format ASCII text field - yyyy-mm-dd-hh-mm-ss) – start point of the dataset

***TIME-PERIOD-END:** (fixed format ASCII text field - yyyy-mm-dd-hh-mm-ss)– end point of the dataset

***TIME-SAMPLING-RATE:** (pick-list 8, up to 80 printable ASCII characters) – to indicate the measurement unit

***ONGOING?:** Yes/No radio button, 1 character ASCII – to indicate whether the data is a ‘datastream’ or a ‘dataset’

***Update-Frequency:** Free-text, up to 80 printable ASCII characters. Sub-field of ONGOING? If ‘Yes’ is selected above, then need to indicate the update frequency (eg. forecast every 6 hours) - this to be greyed out if ‘No’ is selected in the ‘ONGOING?’ field.

***Validity:** Free-text, up to 80 printable ASCII characters. Sub-field of ONGOING? If ‘Yes’ is selected for ONGOING?, then need to indicate the shelf-life of the latest update (i.e. the period for which data remains valid).

***SCALE:** (pick list 9, up to 80 printable ASCII characters): to indicate (approximately) the scale in which the data provided will be appropriate.

***ACCURACY:** (free-text field, up to 80 printable ASCII characters) – to indicate the accuracy of the data (owing to the multitude of data types expected, perhaps the best way to give this would be as a percentage i.e. data accurate to +/- 5%

***GEOGRAPHIC-COVERAGE:** indication of the total area (limits) of the coverage of the dataset using one of the following 3 options:

1. **Box – define a box covering the area of interest**
 - *SOUTH, *NORTH - (2 fixed format ASCII text fields – +/-nn 3 ASCII characters) - to give geographic co-ordinates (lat/long)) to the nearest degree within the ranges +90° to –90° (north positive)**
 - *WEST,*EAST – (2 fixed format ASCII text fields – +/-nnn 4 ASCII characters) - to give geographic co-ordinates (lat/long)) to the nearest degree within the ranges +180° to –180° (east positive).**

2. **Point +Radius – define a point location with a circular area of interest**
 - *POINT (fixed format ASCII text fields– +/-nn.mmm,+/-nnn.mmm - 7 and 8 ASCII characters) to give a point location (to the nearest 1/1000th degree)**

 - *REGION-OF-INFLUENCE (fixed format ASCII text field – +/-nnnn.nKm - 9 ASCII characters) to give region of influence (between 100m and 1000km)**

3. **Named region – define the area of interest by name**

NB. Can select more than one option from both SEA-AREA and LAND-AREA lists, if appropriate

 - *SEA-AREA – (pick-list 10, up to 80 printable ASCII characters) - to give the most appropriate predefined sea/ocean region (eg. North Sea) – one or more selectable from list**

 - *LAND-AREA: (pick-list 11, up to 80 printable ASCII characters) – to give the most appropriate predefined land region (eg. UK)**

 - *AREA-TYPE: (pick-list 12), up to 80 printable ASCII characters –to identify the type of the area covered - one option selectable**

 - *COASTAL-ZONE: (pick-list 13, up to 80 printable ASCII characters) – Sub-menu of AREA-TYPE, functional only if ‘Coastal, or Coastal and Offshore’ is selected above. To identify the countries/continents on which the dataset encroaches within approx. 10km of coast – one or more options selectable**

 - *GEOGRAPHIC-DESCRIPTION (free-text field, consisting of repeated fields of up to 80 printable ASCII characters): General description of geographic distribution and coverage of the dataset, using geographic and regional names. To include the regularity and spread of the data (eg. ‘regular 2D gridded average wind speed and direction at 100m horizontal intervals over 10km square area of Humber Estuary’, or ‘29 irregularly-spaced discrete ‘spot’ temperature readings within the Bristol Channel), and to indicate any major gaps in the coverage. (optional)**

 - *PROJECT (free-text field, up to 80 printable ASCII characters): name of any associated national or international projects (eg. WOCE) (optional), plus organising body**

- *PROJECT-ACRONYM (free-text field, up to 80 printable ASCII characters): comma-separated list of associated project acronyms**
- *PARAMETERS:** (free-text field, up to 80 printable ASCII characters) – to provide a comma separated list of keywords describing the variables represented in the dataset, using free language. (optional)
- *INSTRUMENTS:** (free-text field, up to 80 printable ASCII characters) – to provide a comma separated checklist of the types of instruments/gear or methodology used to collect the data (using generic names). Should indicate accuracy of these instruments or methods. (optional)
- *DATA-THEME: (pick-list 14, up to 160 printable ASCII characters) – to select the theme of the dataset. Use existing NASA GCMD DIF Parameter Validations at:**
http://gcmd.gsfc.nasa.gov/valids/gcmd_parameters.html .
- *DATA-SOURCE (pick-list 15, up to 80 printable ASCII characters) – to indicate the ‘nature’ of the data (e.g. modelled, measured or derived) – one option only from the list**
- *STORAGE-MEDIUM: (pick-list 16, up to 80 printable ASCII characters) – to specify the type or character of the data (e.g. a Paper Chart, Physical data or Electronic data.) one option only from list**
- *DATA-FORM: (pick-list 17, up to 80 printable ASCII characters) – to indicate the form of the data (e.g. physical, electronic or analogue) – one option only from list**
- *SUMMARY (optional free-text field - consisting of up to 30 fields of up to 80 printable ASCII characters) information to provide the consumer with a good overview of the nature of the dataset, similar to a concise abstract. Should contain brief statements that describe the data, such as:**
- a) description of measurements/samples, purpose, platforms, instruments and methods used
 - b) accuracy, and level to which data are processed and quality controlled, together with limitations and fitness of purpose
 - c) arrangement of data
 - d) spatial and temporal resolution
 - e) length of timeseries
 - f) amount of data in terms of no. of stations, sites, cores etc.
 - g) statement of data sources.
- *REFERENCE: (optional free-text field, up to 80 printable ASCII characters) - comma separated references to any other material that relate to the dataset.**

6.5. MERMAID Section 3a: Dataset and Pricing Details

- *DATA-WEBSITE: (optional free-text field, up to 80 printable ASCII characters) - link to further info about the dataset.*
- *ORIGINATOR: (free-text field, up to 80 printable ASCII characters) - to give the name of organisation/person with primary responsibility for intellectual content of the dataset.*
- *CENTRE-NAME: (free-text field, up to 160 printable ASCII characters) - name of data holding centre as in PART A1*
- *AVAILABILITY: (free-text field, up to 80 printable ASCII characters) - any conditions applied to the access or use of the data.*
- *SUPPLY-DETAILS: (optional free-text field, up to 80 printable ASCII characters): any additional information regarding the dataset such as special equipment or software required to read it, including these new fields:*
- *FORMAT: (pick-list 18, up to 80 printable ASCII characters) – to give the name and precise description of the format that the dataset is available in. One or more options selectable from list (last option in the list to be ‘Other’, with a free-text field to provide details.**
- *Supported-Format (pick-list 19, up to 80 printable ASCII characters) – to select which of the MERMAID supported formats the data is in (i.e GRIB2) i.e. those that allow subsets to be extracted.**
- *SIZE: (free-text field, up to 80 printable ASCII characters) - to give the approximate size of the dataset (i.e in Mb if digital, or number and size of boxes (perhaps) if analogue).**
- *DEFAULT-PRICE: (free-text field, up to 80 printable ASCII characters) to give the default price of the dataset, before any discounts have been applied.**
- *SUPPLY-MEDIUM: (pick-list 5, up to 80 printable ASCII characters) - to provide details of the media on which data can be supplied. One or more selectable options from list. This list will be taken from information provided in Section 2, but can be changed for each dataset**
- *Supply-Medium-Quantity: Sub-field of SUPPLY-MEDIUM (free-text field, up to 80 printable ASCII characters) - to indicate the quantity of each of the media selected above.**
- *SUPPLY-COSTS: (free-text field, up to 80 printable ASCII characters) - to give the supply cost for each supply medium defined, (including**

handling cost and physical supply cost, i.e. the cost of a CD-ROM and the time spent to write a dataset on it).

***Delivery-Method: (pick-list 6, up to 80 printable ASCII characters)
Sub-menu of SUPPLY-MEDIUM – to provide the delivery method for each of the supply medium selected above. This will be the same list as provided in section 2, but can be changed for each dataset.**

***SHIPPING-COSTS: (free-text field, up to 80 printable ASCII characters) to give the shipping cost for each shipping method defined.**

***DISCOUNT-CATEGORY (pick-list 7, up to 80 printable ASCII characters): to provide a list of the organisation categories that are applicable for a discount for this dataset. One or more options selectable. The list to be the default list as defined in section 2, with the option to override. The last option on list to be FRIEND.**

***DEFAULT-DISCOUNT-SUBSET: (free input, up to 80 printable ASCII characters, driven by an applet): according to the % of the dataset that a customer is purchasing.**

NB. The discounts given for each dataset will always be applied for that dataset and that organisation/subset.

***SUPPLY-DETAILS-TEXT (optional free-text field, up to 80 printable ASCII characters): any additional information regarding the dataset such as special equipment or software required to read it.**

***CONTACT: (list derived from information entered in PART A2) – to give the name/position of contact responsible for the dataset - one option selectable from the list.**

***COMPLETED-BY: (free-text field, up to 80 printable ASCII characters) - details (name and number) of person completing the record.**

***CURRENCY-DATE: fixed format ASCII text field (yyyy-mm-dd) – date last checked for accuracy (initially set to date first completed).**

***REVISION-DATE: fixed format ASCII text field (yyyy-mm-dd) – date last revised by author**

APPENDIX - PICK LISTS

Items in **bold** are extensions to EDMED

Pick-List 1 : Country

(select only one)

This list states the 239 country names (official short names in English) in alphabetical order as given in ISO-3166-1. There is also a corresponding list of 2 character ASCII codes. The list is updated by the ISO-3166 Maintenance Agency and is complete and up-to-date as of 2001-02-26. See:

http://www.din.de/gremien/nas/nabd/iso3166ma/codlstp1/en_listp1.html .

Afghanistan	Cape Verde	French Guiana
Albania	Cayman Islands	French Polynesia
Algeria	Central African	French Southern
American Samoa	Republic	Territories
Andorra	Chad	Gabon
Angola	Chile	Gambia
Anguilla	China	Georgia
Antarctica	Christmas Island	Germany
Antigua and Barbuda	Cocos (Keeling)	Ghana
Argentina	Islands	Gibraltar
Armenia	Colombia	Greece
Aruba	Comoros	Greenland
Australia	Congo	Grenada
Austria	Congo, the Democratic	Guadeloupe
Azerbaijan	Republic of the	Guam
Bahamas	Cook Islands	Guatemala
Bahrain	Costa Rica	Guinea
Bangladesh	Côte d'Ivoire	Guinea-Bissau
Barbados	Croatia	Guyana
Belarus	Cuba	Haiti
Belgium	Cyprus	Heard Island and
Belize	Czech Republic	Mcdonald Islands
Benin	Denmark	Holy See (Vatican City
Bermuda	Djibouti	state)
Bhutan	Dominica	Honduras
Bolivia	Dominican Republic	Hong Kong
Bosnia and	East timor	Hungary
Herzegovina	Ecuador	Iceland
Botswana	Egypt	India
Bouvet island	El Salvador	Indonesia
Brazil	Equatorial Guinea	Iran, Islamic Republic
British Indian Ocean	Eritrea	of
Territory	Estonia	Iraq
Brunei Darussalam	Ethiopia	Ireland
Bulgaria	Falkland Islands	Israel
Burkina Faso	(Malvinas)	Italy
Burundi	Faroe Islands	Jamaica
Cambodia	Fiji	Japan
Cameroon	Finland	Jordan
Canada	France	Kazakstan



Kenya	Nigeria	Sudan
Kiribati	Niue	Suriname
Korea, Democratic	Norfolk Island	Svalbard and Jan
People's Republic of	Northern Mariana	Mayen
Korea, Republic of	Islands	Swaziland
Kuwait	Norway	Sweden
Kyrgyzstan	Oman	Switzerland
Lao People's	Pakistan	Syrian Arab Republic
Democratic Republic	Palau	Taiwan, Province of
Latvia	Palestinian Territory,	China
Lebanon	occupied	Tajikistan
Lesotho	Panama	Tanzania, United
Liberia	Papua New Guinea	Republic of
Libyan Arab	Paraguay	Thailand
Jamahiriya	Peru	Togo
Liechtenstein	Philippines	Tokelau
Lithuania	Pitcairn	Tonga
Luxembourg	Poland	Trinidad and Tobago
Macau	Portugal	Tunisia
Macedonia, the former	Puerto Rico	Turkey
Yugoslav Republic of	Qatar	Turkmenistan
Madagascar	Réunion	Turks and Caicos
Malawi	Romania	Islands
Malaysia	Russian Federation	Tuvalu
Maldives	Rwanda	Uganda
Mali	Saint Helena	Ukraine
Malta	Saint Kitts and Nevis	United Arab Emirates
Marshall Islands	Saint Lucia	United Kingdom
Martinique	Saint Pierre and	United States
Mauritania	Miquelon	United States minor
Mauritius	Saint Vincent and the	outlying islands
Mayotte	Grenadines	Uruguay
Mexico	Samoa	Uzbekistan
Micronesia, Federated	San Marino	Vanuatu
States of	Sao Tome and	Vatican City State (see
Moldova, Republic of	Principe	Holy See)
Monaco	Saudi Arabia	Venezuela
Mongolia	Senegal	Vietnam
Montserrat	Seychelles	Virgin Islands, British
Morocco	Sierra Leone	Virgin Islands, U.S.
Mozambique	Singapore	Wallis and Futuna
Myanmar	Slovakia	Western Sahara
Namibia	Slovenia	Yemen
Nauru	Solomon Islands	Yugoslavia
Nepal	Somalia	Zaire (see Congo, the
Netherlands	South Africa	Democratic Republic of
Netherlands Antilles	South Georgia and the	the)
New Caledonia	South Sandwich	Zambia
New Zealand	Islands	Zimbabwe
Nicaragua	Spain	
Niger	Sri Lanka	

Pick-List 2 : Language

(*alphabetical order of English name, select 1 only*)

Taken from ISO-639 and corresponding 2 character ASCII code. See:
<http://www.oasis-open.org/cover/iso639a.html> .

Initially only Dutch, English, French, Italian and Polish will be supported.

Abkhazian	Hindi	Russian
Afan (Oromo)	Hungarian	Samoan
Afar	Icelandic	Sangho
Afrikaans	Indonesian	Sanskrit
Albanian	Interlingua	Scots Gaelic
Amharic	Inuktitut	Serbian
Arabic	Inupiak	Serbo-Croatian
Armenian	Irish	Sesotho
Assamese	Italian	Setswana
Aymara	Japanese	Shona
Azerbaijani	Javanese	Sindhi
Bashkir	Kannada	Singhalese
Basque	Kashmiri	Siswati
Bengali;Bangla	Kazakh	Slovak
Bhutani	Kinyarwanda	Slovenian
Bihari	Kirghiz	Somali
Bislama	Kurundi	Spanish
Breton	Korean	Sundanese
Bulgarian	Kurdish	Swahili
Burmese	Laothian	Swedish
Byelorussian	Latin	Tagalog
Cambodian	Latvian; Lettish	Tajik
Catalan	Lingala	Tamil
Chinese	Lithuanian	Tatar
Corsican	Macedonian	Telugu
Croatian	Malagasy	Thai
Czech	Malay	Tibetan
Danish	Malayalam	Tigrinya
Dutch	Maltese	Tonga
English	Maori	Tsonga
Esperanto	Marathi	Turkish
Estonian	Moldavian	Turkmen
Faroese	Mongolian	Twi
Fiji	Nauru	Uigur
Finnish	Nepali	Ukrainian
French	Norwegian	Urdu
Frisian	Occitan	Uzbek
Galician	Oriya	Vietnamese
Georgian	Pashto; Pushto	Volapuk
German	Persian (Farsi)	Welsh
Greek	Polish	Wolof
Greenlandic	Portuguese	Xhosa
Guarani	Punjabi	Yiddish
Gujarati	Quechua	Yoruba
Hausa	Rhaeto-Romance	Zhuang
Hebrew	Romanian	Zulu

Pick-List 3 : Title

(select only one)

Dr
Professor
Mr
Mrs
Miss
Ms

Pick-List 4 : Contact Role

(select one or more)

Profile Administration
Pricing Administration
Dataset Administration
All of the above

Pick-List 5 : Supply Media

(select only one for default, but one or more otherwise)

ftp
e-mail
CD-ROM
ZIP Disk
JAZZ Disk
Floppy Disk
Hard (Paper) Copy

Pick-List 6 : Shipping Methods

(select only one for default, but one or more otherwise) - to be extended

Express Courier
Normal Post

Pick-List 7 : Discount Categories

(select none, one or more)

Academic
Non-Government Research
Government Research
Government Defence
Government Other
Charity
Commercial
Friend (Special Customer) – with option here to enter details, or select from a list of registered users – can enter details of more than one ‘friend’

Pick-List 8 : Time Sampling Rate

(select only one)

Seconds
Minutes
Hours
Days
Weeks

Months
Years

Pick-List 9 : Scale

(select only one)

10m
100m
1km
10km
100km
1000km

Pick-List 10 : Sea Areas

(select one or more)

This list is tiered, with items in BLOCK CAPITALS shown on the highest level list, and then the appropriate menus in lower case to be 'spawned' from this main list. Each area is defined by four co-ordinates (N,S,E and W), which provide a rectangle around the area (to be provided by the BODC).

NORTH ATLANTIC REGION

Skagerrak
North Sea
Inner Seas W. Scotland
Irish Sea
Bristol Channel
English Channel
Celtic Sea
Bay of Biscay
Labrador Sea
Gulf of St. Lawrence
Bay of Fundy
Gulf of Mexico
Caribbean Sea
Gulf of Guinea
'remaining' N. Atlantic Ocean

BALTIC REGION

Kattegat, Sound and Bels
Gulf of Bothnia
Gulf of Finland
Gulf of Riga
'remaining' Baltic Sea

MEDITERRANEAN REGION

Strait of Gibraltar
Alboran Sea
Balearic Sea
Ligurian Sea
Tyrrhenian Sea

'remaining' Western Mediterranean
Ionian Sea
Adriatic Sea
Aegean Sea
'remaining' Eastern Mediterranean
Sea of Marmara
Black Sea
Sea of Azov

SOUTH ATLANTIC REGION

Rio de La Plata
'remaining' S. Atlantic Ocean

INDIAN OCEAN REGION

Gulf of Suez
Gulf of Aqaba
Red Sea
Gulf of Aden
Gulf of Oman
Gulf of Iran
Laccadive Sea
Bay of Bengal
Andaman Sea
Mozambique Channel
Malacca and Singapore Straits
'remaining' Indian Ocean

SE ASIA SEAS REGION

Gulf of Thailand
East Indian Archipelago
South China Sea

NORTH PACIFIC REGION

Philippine Sea
Eastern China Sea
Yellow Sea
Japan Sea
Inland Sea
Sea of Okhotsk
Bering Sea
Gulf of Alaska
Coastal Waters SE Alaska and British Columbia
Gulf of California
'remaining' N. Pacific Ocean

SOUTH PACIFIC REGION

Great Australian Bight
Bass Strait
Tasman Sea
Coral Sea



Solomon Sea
Bismarck Sea
'remaining' S. Pacific Ocean

ARCTIC REGION

Greenland Sea
Norwegian Sea
Barents Sea
White Sea
Kara Sea
Laptev Sea
East Siberian Sea
Chuckchi Sea
Beaufort Sea
Northwestern Passages
Baffin Bay
Davis Strait
Hudson Bay
Hudson Strait
Lincoln Sea
'remaining' Arctic Ocean

ANTARCTIC REGION

Southern Ocean

WORLD WIDE COVERAGE

Pick-List 11 : Land Areas

(select one or more)

This list is tiered, with items in BLOCK CAPITALS shown on the highest level list, and then the appropriate menus in lower case to be 'spawned' from this main list. Each area to be defined by four co-ordinates (N,S,E and W) that provide the rectangle surrounding the area (to be compiled by MERMAID consortium).

N. AMERICA

Greenland
Alaska
NW. Canada
NE. Canada
SW. Canada
SE. Canada
NW. America
NE. America
SW. America
SE. America
Caribbean Islands



S.AMERICA

- Central America
- North S. America
- West S. America
- East S. America
- South S. America

EUROPE

- Iceland
- Scandinavia
- United Kingdom
- Western Europe
- Central Europe
- Eastern Europe

AFRICA

- North Africa
- West Africa
- East Africa
- Central Africa
- South Africa

ASIA

- Middle East
- West Asia
- Indian Peninsula
- SE Asia
- Indonesian Archipelago
- Far East
- Central Asia
- Siberia

AUSTRALASIA

- Papua New Guinea
- Northern Australia
- Western Australia
- Southern Australia and Tasmania
- Eastern Australia
- New Zealand
- South Sea Islands

ANTARCTICA

Pick-List 12 : Area-Type

(select only one)

- Offshore
- Coastal (including Riverine and Estuarine)
- Offshore and Coastal



Pick-List 13 : Coastal Zone

(select only one)

This list is tiered, with items in BLOCK CAPITALS shown on the highest level list, and then the appropriate menus in lower case to be 'spawned' from this main list.

ISLANDS

ANTARCTICA

AUSTRALASIA

ASIA

AFRICA

SOUTH AMERICA

CENTRAL AMERICA

NORTH AMERICA

- Alaska
- Canada
- Greenland
- USA

EUROPE

- Albania
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Denmark
- Estonia
- Finland
- France
- Georgia
- Greece
- Iceland
- Ireland
- Italy
- Latvia
- Lithuania
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Russia



Spain
 Spitzbergen
 Sweden
 United Kingdom
 Ukraine
 Yugoslavia

MIDDLE-EAST
 Israel
 Lebanon
 Syria

Pick-List 14 : Data Theme
 (select one or more)

This list is a subset of the regularly maintained NASA Global Change Master Directory Interchange Format (GCMD DIF) valid keywords, to provide a global context for marine environmental science, as of 04/04/2001. See: http://gcmd.gsfc.nasa.gov/valids/gcmd_parameters.html .

Extra keywords have been added (in bold), to cover marine operational day-to-day practical matters. These may be submitted to NASA for incorporation into their keyword lists. The top level Category="Earth Science" is ignored and the Topics; "Agriculture", "Human Dimensions", "Land Surface", "Paleoclimate", and "Solar-terrestrial Interactions" are omitted (though could be added later if required). This could be implemented as a two or three level hierarchy of pick-lists.

TOPIC	Term	Variable
ATMOSPHERE	Aerosols	Aerosol Backscatter Aerosol Extinction Aerosol Optical Depth/Thickness Aerosol Particle Properties Aerosol Radiance Carbonaceous Aerosols Cloud Condensation Nuclei Dust/Ash Nitrate Particles Organic Particles Particulate Matter Sulfate Particles
	Air Quality	Carbon Monoxide Emissions Lead Nitrogen Oxides Particulates Smog Sulfur Oxides Tropospheric Ozone Turbidity



	Visibility
	Volatile Organic Compounds
Altitude	Barometric Altitude
	Geopotential Height
	Planetary Boundary Layer Height
	Station Height
	Stratopause
	Tropopause
Atmospheric Chemistry	Carbon Dioxide
	Carbon Monoxide
	Carbonyl Sulfide
	Chlorine Dioxide
	Chlorine Monoxide
	Chlorine Nitrate
	Chlorofluorocarbons
	Dimethyl Sulfide
	Halocarbons
	Hydrochlorofluorocarbons
	Hydrofluorocarbons
	Hydroxyl
	Methane
	Nitric Acid
	Nitrogen
	Nitrogen Dioxide
	Nitrogen Oxides
	Nitrous Oxide
	Non-methane Hydrocarbons
	Oxygen
	Ozone
	Pesticides/Pcbs
	Photolysis Rates
	Sulfur Dioxide
	Sulfur Oxides
	Trace Elements
	Trace Gases
	Volatile Organic Compounds
Atmospheric Electricity	Atmospheric Conductivity
	Lightning
	Total Electron Content
Atmospheric Phenomena	Cyclones
	Drought
	Fog
	Freeze
	Frost
	Hurricanes
	Lightning
	Monsoons
	Storms
	Tornados
	Typhoons
Atmospheric Pressure	Anticyclones/Cyclones
	Atmospheric Pressure
	Differential Pressure
	Gravity Wave



	Hydrostatic Pressure
	Oscillations
	Planetary Boundary Layer Height
	Pressure Anomalies
	Pressure Tendency
	Pressure Thickness
	Sea Level Pressure
	Static Pressure
	Surface Pressure
Atmospheric Temperature	
	Air Temperature
	Atmospheric Stability
	Boundary Layer Temperature
	Degree Days
	Deiced Temperature
	Inversion Height
	Maximum/Minimum Temperature
	Potential Temperature
	Skin Temperature
	Static Temperature
	Surface Air Temperature
	Temperature Anomalies
	Virtual Temperature
Atmospheric Water Vapour	
	Condensation
	Dew Point
	Evaporation
	Evapotranspiration
	Humidity
	Precipitable Water
	Sublimation
	Water Vapor
Atmospheric Winds	
	Convection
	Convergence/Divergence
	Streamfunctions
	Surface Winds
	Turbulence
	Upper Level Winds
	Vertical Wind Motion
	Vorticity
	Wind Chill
	Wind Shear
	Wind Stress
Clouds	
	Cloud Amount/Frequency
	Cloud Asymmetry
	Cloud Ceiling
	Cloud Condensation Nuclei
	Cloud Emissivity
	Cloud Forcing
	Cloud Height
	Cloud Liquid Water/Ice
	Cloud Optical Depth/Thickness
	Cloud Optical Thickness
	Cloud Precipitable Water
	Cloud Reflectance
	Cloud Top Pressure
	Cloud Top Temperature



		Cloud Types Cloud Vertical Distribution Droplet Concentration/Size
	Precipitation	Acid Rain Droplet Size Freezing Rain Hail Hydrometeors Liquid Water Equivalent Precipitation Amount Precipitation Anomalies Precipitation Rate Rain Sleet Snow
	Radiation Budget	Absorption Albedo Anisotropy Atmospheric Emitted Radiation Atmospheric Heating Emissivity Heat Flux Incoming Shortwave Radiation Longwave Radiation Net Radiation Optical Depth/Thickness Outgoing Longwave Radiation Radiative Flux Radiative Forcing Reflectance Scattering Shortwave Radiation Solar Irradiance Solar Radiation Sunshine Transmittance Ultraviolet Radiation
BIOSPHERE	Aquatic Habitat	Benthic Habitat Coastal Habitat Estuarine Habitat Lakes Pelagic Habitat Reef Habitat Rivers/Stream Habitat Saline Lakes
	Ecological Dynamics	Adaptation Bioaccumulation Bioavailability Biogeochemical Cycles Bioluminescence Biomass Chemosynthesis Community Structure Competition



- Consumption
 - Decomposition
 - Diurnal Movements
 - Dominance
 - Endangered Species
 - Excretion
 - Extinction
 - Feeding Habitat
 - Fire Characteristics
 - Fire Occurrence
 - Food-web Dynamics
 - Herbivory
 - Life History
 - Migratory Rates/Routes
 - Mutation
 - Mutualism
 - Nutrient Cycling
 - Oxygen Demand
 - Parasitism
 - Photosynthesis
 - Population Dynamics
 - Post-breeding
 - Predation
 - Primary Production
 - Range Changes
 - Respiration
 - Scavenging
 - Secondary Production
 - Selection
 - Succession
 - Survival
 - Symbiosis
 - Toxicity
 - Trophic Dynamics
- Fungi
- Biomass
 - Molds
 - Mushrooms
 - Slime Molds
 - Sporozoans
 - Yeast
- Microbiota
- Amoebae
 - Bacteria
 - Biomass
 - Blue-green Algae
 - Chlorophyll
 - Ciliates
 - Coccolithophore
 - Diatoms
 - Flagellates
 - Foraminifers
 - Microalgae
 - Microphyte
 - Phytoplankton
 - Pigments
 - Plankton
 - Protist
 - Radiolarians
 - Zooplankton



Terrestrial Habitat

- Agricultural Land
- Alpine/Tundra
- Beaches
- Caves
- Desert
- Dunes
- Forest Habitat
- Grassland
- Islands
- Montane Habitat
- Savanna
- Shrubland/Scrub
- Sinkholes
- Urban Land
- Wetlands

Vegetation

- Algae
- Biomass
- Canopy Characteristics
- Carbon
- Chlorophyll
- Conifers
- Crown
- Deciduous Vegetation
- Dominant Species
- Exotic Vegetation
- Ferns
- Flowering Plants
- Forest Composition/Structure
- Herbivory
- Importance Value
- Indigenous Vegetation
- Leaf Characteristics
- Lichens
- Litter Characteristics
- Macroalgae
- Macrophyte
- Mosses And Liverworts
- Nitrogen
- Nutrients
- Phosphorus
- Photosynthetically Active Radiation
- Phytoplankton
- Pigments
- Plant Characteristics
- Pollen
- Reclamation/Revegetation/Restoration
- Reforestation
- Tree Rings
- Vegetation Cover
- Vegetation Index
- Vegetation Species

Wetlands

- Estuarine Wetlands
- Lacustrine Wetlands
- Marine
- Marshes
- Palustrine Wetlands
- Peatlands



		Riparian Wetlands Swamps
	Zoology	Amphibians Anemones Arachnids Arthropods Biomass Birds Centipedes Corals Crustaceans Echinoderms Exotic Species Fish Flatworms Indigenous Species Insects Invertebrates Jellyfish Mammals Millipedes Mollusks Reptiles Roundworms Segmented Worms Sponges Vertebrates Zooplankton
CRYOSPHERE	Sea Ice	Heat Flux Ice Deformation Ice Depth/Thickness Ice Edges Ice Extent Ice Floes Ice Growth/Melt Ice Roughness Ice Temperature Ice Types Icebergs Leads Pack Ice Polynyas Reflectance Sea Ice Age Sea Ice Concentration Sea Ice Motion
	Snow/Ice	Ablation Albedo Avalanche Depth Hoar Freeze/Thaw Frost Glaciers Ice Depth/Thickness Ice Extent



		Ice Growth/Melt
		Ice Motion
		Ice Sheet Elevation
		Ice Sheets
		Ice Velocity
		Lake Ice
		Permafrost
		River Ice
		Snow Cover
		Snow Density
		Snow Depth
		Snow Energy Balance
		Snow Facies
		Snow Melt
		Snow Water Equivalent
		Snow/Ice Temperature
		Whiteout
HYDROSPHERE		
	Ground Water	
		Aquifers
		Discharge/Flow
		Dispersion
		Drainage
		Groundwater Chemistry
		Infiltration
		Land Subsidence
		Percolation
		Saltwater Intrusion
		Springs
		Water Table
	Snow/Ice	
		Ablation
		Albedo
		Avalanche
		Depth Hoar
		Freeze/Thaw
		Frost
		Glaciers
		Ice Depth/Thickness
		Ice Extent
		Ice Growth/Melt
		Ice Motion
		Ice Sheet Elevation
		Ice Sheets
		Ice Velocity
		Lake Ice
		Permafrost
		River Ice
		Snow Cover
		Snow Density
		Snow Depth
		Snow Energy Balance
		Snow Facies
		Snow Melt
		Snow Water Equivalent
		Snow/Ice Temperature
		Whiteout
	Surface Water	
		Aquifer Recharge



		Discharge/Flow Drainage Floods Hydropattern Hydroperiod Inundation Lakes Rivers/Streams Runoff Stage Height Stream Chemistry Total Surface Water Water Channels Water Depth Water Pressure Water Yield Wetlands
	Water Quality	Acid Deposition Alkalinity Benthic Index Carbon Dioxide Carcinogens Chlorophyll Conductivity Contaminants Dissolved Gases Dissolved Solids Hydrocarbons Inorganic Matter Light Transmission Nitrogen Compounds Nutrients Organic Matter Oxygen pH Phosphorous Compounds Radioisotopes Stable Isotopes Suspended Solids Toxic Chemicals Trace Metals Turbidity Water Temperature
OCEANS	Bathymetry	Seafloor Topography Water Depth Sonar Imagery
	Coastal Processes	Barrier Islands Beaches Coastal Elevation Coral Reefs Deltas Dunes Erosion Estuaries Fjords



	Inlets
	Intertidal Zone
	Lagoons
	Local Subsidence Trends
	Longshore Currents
	Mangroves
	Marshes
	Rocky Coasts
	Saltwater Intrusion
	Sea Level Rise
	Sea Surface Height
	Sediment Transport
	Sedimentation
	Shoals
	Shoreline Displacement
	Shorelines
	Storm Surge
	Tidal Height
Marine Biology	
	Fish
	Marine Birds
	Marine Habitat
	Marine Invertebrates
	Marine Mammals
	Marine Microbiota
	Marine Plants
	Marine Reptiles
Marine Environment Monitoring	
	Marine Obstructions
	Emergency Oil Spills
	Emergency Chemical Spills
	Fisheries
	Maritime Operations
	Pollution levels
	Ports and Harbours
	Salvage
	Sea Floor Samples
	Search and Rescue
	Shipping Registration
	Site Assessments and Surveys
Marine Geophysics	
	Abyssal Hills/Plains
	Benthic Heat Flow
	Continental Drift
	Continental Rises/Slopes
	Continental Shelves
	Fracture Zones
	Guyots
	Hydrothermal Vents
	Island Arcs
	Magnetic Anomalies
	Marine Gravity Field
	Marine Magnetism
	Mid-ocean Ridges
	Ocean Plateaus/Ridges
	Rift Valleys
	Seafloor Spreading
	Seamounts

Marine Sediments

Subduction
Submarine Canyons
Trenches

Bioturbation
Carbonate Sediments
Diagenesis
Evaporites
Hydrogenous Sediments
Particle Flux
Sediment Characteristics
Sediment Composition
Sediment Grain Size
Sediment Transport
Sedimentation
Siliceous Sediments
Stratigraphic Sequence
Suspended Solids
Terrigenous Sediments
Turbidity

Ocean Acoustics

Acoustic Attenuation/Transmission
Acoustic Frequency
Acoustic Reflectivity
Acoustic Scattering
Acoustic Tomography
Acoustic Velocity
Ambient Noise

Ocean Chemistry

Alkalinity
Ammonia
Biogeochemical Cycles
Biomedical Chemicals
Carbon
Carbon Dioxide
Carbonate
Chlorophyll
Dissolved Gases
Dissolved Solids
Hydrocarbons
Inorganic Carbon
Inorganic Matter
Nitrate
Nitric Acid
Nitrite
Nitrogen
Nitrogen Dioxide
Nitrous Oxide
Nutrients
Ocean Tracers
Organic Carbon
Organic Matter
Oxygen
pH
Phosphate
Pigments
Radiocarbon
Radionuclides
Silicate
Stable Isotopes

Ocean Circulation

Suspended Solids
Trace Elements

Advection
Buoy Position
Convection
Diffusion
Eddies
Fresh Water Flux
Fronts
Gyres
Ocean Currents
Ocean Mixed Layer
Thermohaline Circulation
Turbulence
Upwelling
Vorticity
Water Masses
Wind-driven Circulation

Ocean Heat Budget

Advection
Bowen Ratio
Condensation
Conduction
Convection
Diffusion
Evaporation
Heat Flux
Heating Rate
Longwave Radiation
Reflectance
Shortwave Radiation

Ocean Optics

Absorption
Aphotic/Photic Zone
Attenuation/Transmission
Bioluminescence
Extinction Coefficients
Fluorescence
Gelbstoff
Irradiance
Ocean Color
Optical Depth
Photosynthetically Active Radiation
Radiance
Reflectance
Scattering
Secchi Depth
Turbidity
Water-leaving Radiance

Ocean Pressure

Sea Level Pressure
Water Pressure

Ocean Temperature

Ocean Mixed Layer
Potential Temperature
Sea Surface Temperature
Thermocline
Water Temperature

Ocean Waves

- Fetch
- Internal Waves
- Sea State
- Seiches
- Significant Wave Height
- Storm Surge
- Surf Beat
- Swells
- Tsunamis
- Wave Frequency
- Wave Height
- Wave Length
- Wave Period
- Wave Spectra
- Wave Speed/Direction
- Wave Types
- Wind Waves

Ocean Winds

- Convergence/Divergence
- Surface Winds
- Turbulence
- Vertical Wind Motion
- Vorticity
- Wind Chill
- Wind Shear
- Wind Stress

Salinity/Density

- Conductivity
- Density
- Desalinization
- Halocline
- Potential Density
- Pycnocline
- Salinity
- Salt Transport

Sea Ice

- Heat Flux
- Ice Deformation
- Ice Depth/Thickness
- Ice Edges
- Ice Extent
- Ice Floes
- Ice Growth/Melt
- Ice Roughness
- Ice Temperature
- Ice Types
- Icebergs
- Leads
- Pack Ice
- Polynyas
- Reflectance
- Sea Ice Age
- Sea Ice Concentration
- Sea Ice Motion

Sea Surface Height

- Sea Surface Height
- Sea Surface Slope

Tides



		Storm Surge Tidal Components Tidal Currents Tidal Height Tidal Range
	Water Quality	
SOLID EARTH		Ocean Contaminants
	Geochemistry	Biogeochemistry Chemical Weathering Fixation Hydration Ion Exchange Isotopes Major Elements Minor Elements Oxidation/Reduction Trace Elements
	Geodetics/Gravity	Control Surveys Crustal Motion Geoid Properties Gravitational Field Gravity Ocean Crust Deformation Polar Motion Reference Systems Rotational Variations Satellite Orbits
	Geomagnetism	Electrical Field Geomagnetic Forecasts Geomagnetic Indices Geomagnetic Induction Magnetic Anomalies Magnetic Declination Magnetic Field Magnetic Inclination Magnetic Intensity Paleomagnetism Reference Fields
	Geomorphology	Coastal Landforms/Processes Eolian Landforms/Processes Fluvial Landforms/Processes Glacial Landforms/Processes Karst Landforms/Processes Tectonic Landforms/Processes
	Geothermal	Geothermal Energy Geothermal Temperature
	Natural Resources	Coal Gas Hydrates Metals Natural Gas Non-metallic Minerals Petroleum

	Radioactive Elements Reclamation/Revegetation/Restoration
Rocks/Minerals	Age Determinations Bedrock Lithology Igneous Rocks Metamorphic Rocks Meteorites Mineraloids Minerals/Crystals Sedimentary Rocks Sediments
Seismology	Earthquake Dynamics Earthquake Occurrences Earthquake Predictions Seismic Body Waves Seismic Profile Seismic Surface Waves
Tectonics	Continental Tectonics Convergence/Divergence Core Processes Crustal Motion Faults Folds Isostatic Rebound Neotectonics Strain Stratigraphic Sequence Stress
Volcanoes	Eruption Dynamics Lava Magma Pyroclastics Volcanic Ash/Dust Volcanic Gases

Pick-List 15 : Data Source

(select only one)

Measured (Observations)

Modelled

Derived

Pick-List 16 : Storage Medium, Physical Character

(select only one)

Physical data (e.g. Core samples, etc.)

Electronic data

Analogue data

Pick-List 17 : Data Form

(select one or more)

Document
 Report
 Reference
 Journal
Sample
Parameters
Atlases and Maps
Catalogues – Directories etc.

Pick-List 18 : Data Formats
(select only one) – to be extended

ASCII
 MS Word
 MS Excel
 txt
 etc.

BINARY
 Grib
 Bufr
 etc

Other

Pick-List 19 : Supported Formats
(select only one) - to be extended

GRIB2
Format 1 (Regular 2D Gridded Harmonics)
Format 2 (Irregular 2D Gridded Harmonics)
Format 3 (Irregular 2D Gridded Residuals)
Format 4 (Regular 3D Gridded Timeseries)
Format 5 (Irregular Timeseries)
Format 6 (Single Point Timeseries)