

3rd Plenary meeting, Split, 24-25 September 2014



SeaDataNet

PAN-EUROPEAN INFRASTRUCTURE
FOR OCEAN & MARINE DATA
MANAGEMENT

***NetCDF support via
New Download manager 1.4.4***

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NetCDF – in a few words

- Network Common Data Form (NetCDF) is an interface for array-oriented data access and a library that provides an implementation of the interface.
- Which means
 - NetCDF is a data model rather than a data format
 - Data in NetCDF are accessed by API or tools calling that API
- NetCDF is a binary data format
- NetCDF CF (Climate and Forecast Metadata conventions)
 - ‘Profile’ of the NetCDF data model designed to enhanced data interoperability

NetCDF in SeaDataNet

- NetCDF CF adopted by SeaDataNet (Manual on SeaDataNet web site, Data transport formats)
 - CF 1.6 for Point data : (L24 = CFPOINT, version 1.0)
 - Vertical profiles (CTD, XBT, Bottle), Time series (current meters, Sea level...), Trajectories (Thermosalinograph)
 - Supported by all SeaDataNet tools (NEMO, Download manager - modus 1, 2 and 3 -, OdvSDN2CFPOINT and MedSDN2CFPOINT)
 - Trajectory profiles (like ADCP underway) and Time series profiles (like Moored ADCP)
 - Supported only by Download Manager in Modus 1 (on the shelves files)

Download manager v1.4.4

- is able to
 - **Generate NetCDF on the fly** from data in database
 - **Reformat SDN ODV or SDN MEDATLAS files** to SDN NetCDF files on the fly
 - **Split multi-station SDN NetCDF files** into mono-station SDN NetCDF files



Possible conversions with DM 1.4.4

Input format:

Format at which files are stored in the data centre

Output format:

Format at which the DM delivers the data

mono: 1 LOCAL_CDI_ID

multi: n LOCAL_CDI_IDs

Input format		Modus	Output format (always mono)
Name	Type		
CFPOINT	mono	1	CFPOINT
	multi	3	CFPOINT
MEDATLAS	mono	1	CFPOINT
			MEDATLAS
		3	ODV
	multi	3	CFPOINT
			MEDATLAS
			ODV
ODV	mono	1	CFPOINT
			ODV
	multi	3	CFPOINT
			ODV
Database	--	2	ODV
	--	2	CFPOINT

To deliver your files under several formats

- It is **mandatory** to have all **possible** formats in the CDI metadata
 - var37 and var38 of MIKADO possible values:

Var 37 : Format name	Var 38: Format version
CFPOINT	1.0
MEDATLAS	2.0
ODV	0.4

Then formats are available for downloading

Please motivate why you want to have access to these data sets and for what purpose.

Text 500

Submit request list

Reset

Cancel request

Switch all formats to: Ocean Data View ASCII input (ODV) Switch

CDI-record id	Dataset name	Data access restriction	Data format
☒ 36200	2010070060.ctd(00004)	SeaDataNet licence	Ocean Data View ASCII input (ODV)
☒ 36211	2010070060.ctd(00006)	SeaDataNet licence	Ocean Data View ASCII input (ODV) Climate and Forecast Point Data NetCDF (CFPOINT) MEDATLAS ASCII (MEDATLAS) Ocean Data View ASCII input (ODV)

Data files conversion

- If you have data at ODV or MEDATLAS format, and that you want them at SDN NetCDF
 - MedSDN2CFPOINT
 - Converts files at SDN MEDATLAS format
→ to files at SDN NetCDF CFPOINT format
 - OdvSDN2CFPOINT
 - Converts files at SDN ODV format
→ to files at SDN NetCDF CFPOINT format

But remember it is not necessary for SeaDataNet Download Manager which can convert your ODV and/or MEDATLAS file to NetCDF on the fly



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NEXT STEPS ON FORMATS

Implement latest updates on formats (1)

1. New optional information in the SDN_parameter_mapping lines
 - For **instrument - vocab L22** and **fall rate equation - vocab L33** (for XBT measurements)
 - Example of a valid mapping line

```
//<subject>SDN:LOCAL:Depth</subject><object>SDN:P01::ADEPZZ01</object><units>SDN:P06::ULAA</units><instrument>SDN:L22::TOOL0262</instrument><fall_rate>SDN:L33::011</fall_rate>
```

Implement latest updates on formats (2)

2. Linkage to external references

New tag to have a link toward an external reference on the CDI, like a CSR, a CDI metadata description, a DOI in which the CDI is published

`<sdn_reference xlink:type=URN xlink:role=text xlink:href=URI
sdn:scope=EDMO_code||'|LOCAL_CDI_ID/>>`

xlink:type = URN of the document type L23 vocab: *SDN:L23::CDI*

xlink:role = purpose of the document: *isDescribedBy* or *isObservedBy*

xlink:href = URL or URN of the document:

http://seadatanet.maris2.nl/v_cdi_v3/print_xml.asp?edmo=486&identifier=8575

sdn:scope = used only in multi-station ODV files: *486:8575*

Implement latest updates on formats (3)

- ➔ Upgrade of SeaDataNet tools to be able to generate, read and convert the new information
 - NEMO
 - ODV
 - Format converters
 - Download manager
 - for conversion on the fly (MODUS 1,3), for splitting the multi-station files (MODUS 3) and for extraction from a database (MODUS 2)
- ➔ Upgrades under development, new release planned in March 2015