GCW Portal
Data Catalogue
Status and plans

Øystein Godøy
GCW internet access points

http://gcw.met.no/  http://globalcryospherewatch.org/
Purpose of the Portal

- To provide an overview of datasets relevant to GCW
- To provide access to datasets wherever possible
  - Real time data streams
  - Archive access
- To connect GCW with
  - WMO Information System
  - WIGOS
- Distributed Data Management
  - Metadata driven
  - Currently not hosting data
    - Possible, but would potentially require some additional funding
Metadata

- Data and metadata are of equal importance.
- Two flavours of metadata serve different purposes
  - WIS metadata help you find and access observational data.
  - WIGOS metadata help you understand observations.
Search for GCW datasets

The Global Cryosphere Watch catalogue is yet not considered an operational service. It is populated with metadata harvested from a number of contributing data centres, but data remains in the original location and are served through the interfaces supported by the originating data centre. The process of harvesting, filtering and translating metadata is still under development and will be modified through dialogue with contributing data centres and WMO activities organised through WIS and WGOS.

Search the Global Cryosphere Watch catalogue. Use the lower left hand side menu to specify search criteria and use the tab menu below to alter how results are presented. Remember that the search criteria specified in the menu are additive (in the sense that e.g. both time and geographical position may be used to filter information).

Initially, only directory level datasets are shown. For each directory level dataset containing files on a second level, there is a small [+1] button that provides access to individual files belonging to a dataset.

<table>
<thead>
<tr>
<th>Dataset name</th>
<th>Topics and variables</th>
<th>Contact (E-mail)</th>
<th>Abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>cc.osisaf.nh</td>
<td>Cryosphere &gt; Sea Ice &gt; HIDDEN Cryosphere &gt; Sea Ice &gt; Sea Ice Concentration Cryosphere &gt; Sea Ice &gt; Sea Ice Edge Cryosphere &gt; Sea Ice &gt; Sea Ice Extent Geographical Region &gt; Northern hemisphere NORMET &gt; Norwegian Meteorological Institute, Norway Not Available &gt; Not Available &gt; HIDDEN Oceans &gt; Sea Ice &gt; HIDDEN Oceans &gt; Sea Ice &gt; Sea Ice Concentration Oceans &gt; Sea Ice &gt; Sea Ice Edge Oceans &gt; Sea Ice &gt; Sea Ice</td>
<td>Not Available</td>
<td>Monthly sea ice concentration estimated from satellite data within the framework of EJMETSAF Ocean and Sea Ice SAF.</td>
</tr>
</tbody>
</table>
Status (1)

- Manually initiated metadata ingestion, automated harvest
  - National Snow and Ice Data Centre
  - British Antarctic Survey
  - NPI
  - CryoClim
  - CHINARE
  - NIPR
  - CryoNet
    - Davos
    - Sonnblick
      - Via PANGAEA

- Have tested against
  - CCIN
    - Semantic issues
  - WGMS
    - Standardisation issues
  - PANGAEA
    - Granularity issues
    - Further discussions planned
  - IASOA
    - Semantic issues
  - AARI
    - Sea Ice Charts
  - FMI
    - Interfaces issues
  - EUMETSAT
    - Interfaces have been updated, need to recheck
  - GTN-P
    - Standardisation issues
  - ECDS
Status (2)

• Automatic filtering of harvested records
  • Where no dedicated “cryosphere” or “GCW” sets
  • Filters on keywords related to cryosphere
    – Depends on semantic framework
• Manually supervised ingestion of harvested metadata
  • Formats used so far GCMD DIF, ISO19115 (various flavours), FGDC, ad hoc formats, ...
    – Formats or structure is not the issue, semantics are...
• Metadata are exposed through OAI-PMH
  • GCMD DIF and ISO19115
  • WMO validation in place
    – WIS, not WIGOS, need further development
Main challenges

- Dedicated subsets
- Standardised controlled vocabularies in machine readable form
  - Filtering
  - Transformation
- Propagation of metadata to global frameworks
  - Standardisation
  - Duplication of records
  - Require agreement to propagate metadata
- Interpretation of standards
- End point availability
Ongoing work

- Reimplementation of human interfaces
  - CMS solution based on Drupal and integration of web services
- Translation of metadata standards
- Development of semantic interoperability capability for metadata
- Data brokering
  - Provided standardised interfaces to data