

PICES TCODE Catalog Service

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TCODE metadata sharing initiatives

- PICES Long Term Time Series
- Bering Sea Ecosystem Biophysical Metadatabase
- North Pacific Ecosystem Metadatabase
- PICES metadata federation project (PMFP) (Bernard A. Megrey and S. Allen Macklin, 2005) for preparing, publishing and searching metadata on marine ecosystems of the North Pacific
- the main goal of PMFP was to implement and maintain an infrastructure with use of
 - the FGDC metadata representation standard
 - MP
 - Isite
 - Z39.50
 - the NSDI Clearinghouse Network, etc.

Cataloging with open source technology

- at some point, the Geonetwork Opensource became available
- after a positive evaluation of its capabilities at TINRO, the Geonetwork software package was installed on the rented server as PTC
- when the NSDI Clearinghouse Network ceased functioning, all collected metadata holdings eventually had been automatically converted (with loss of some content) and moved to the PICES TCODE metadata catalog (PTC)

New catalog-2

- recently, the rented server was attacked with ransomware
- the contract with the provider was terminated
- PTC-2 (ver. 3.4, ISO 19115/19139, lives on a virtual server in TINRO, tcode.tinro.ru/geonetwork/) became the primary source of collected metadata including lossy converted PMFP records
- original PMFP metadata records (FGDC) are available also as XML files on the project site

Metadata

- features of some resource (data, information, service) that important for
 - discovery
 - understanding
 - preliminary evaluation
 - retrieving
 - use
 - management, etc.
- structured and may contain different fields
- include links to corresponding providers and lead eventually to seeking resources

Standards

- standards (represented as schemes) define syntax and semantics of metadata descriptions
- the most recent version 3 of Geonetwork Opensource allows to use
 - the ISO 19115/11139 standard for spatial resources (e.g., datasets, services, maps)
 - the Dublin Core scheme for referencing publications and reports,
 - the ISO 19110 standard for the feature cataloging
- initially used FGDC may be (lossy) converted to ISO 19115/11139

Creating and publishing metadata records

- the basic task for a creating metadata records consists of filling screen forms
- a user chooses a metadata template and a group, and then fills out the chosen fields
- records can be associated with different types of resources (files, weblinks, etc.)
- external categories (as, e.g., Datasets, Maps, PICES related datasets, etc.) may be assigned to metadata records (not parts of metadata)
- users may identify user groups and the privileges (to view, to download, to edit, etc.) to metadata records and any attached data

Productivity tools

- a user can choose terms from one or more thesauri for different fields of knowledge
- some fragments (partially filled subtemplates) may be used in different metadata records
- the editor supports
 - standard templates,
 - multilingual metadata editing
 - a validation system, and
 - a suggestion systemto improve metadata quality, etc.

Multiple catalogs and harvesting, administration panel

- data discovery is usually done against multiple catalogs
- for searching speedup, some metadata records may be harvested (duplicated and stored locally)
- automated harvesting may be processed periodically so as metadata are kept aligned
- administration panel provides statistics on searching and collected records

Assigned roles

- a catalog user may stay non-authenticated (Guest)
- roles define users management or metadata manipulations tasks that they can perform
 - User Administrator
 - Content Reviewer
 - Editor
 - Registered User
- a user may have different roles in different groups
- Administrators may include registered users into one or several groups (by expert group, by countries, etc.)

Registration (video)

Click to play!

A metadata record life cycle

- Drafted (by an editor)
- Submitted (for a review by by a content reviewer)
- Approved (by a content reviewer)
- Retired

Searching

- the user may fill the text search box,
- define
 - categories of resources,
 - keywords,
 - contacts,
- specify
 - geographical areas
 - periods when records were created, etc.

Searching results

- title,
- abstract,
- categories,
- status,
- overview, and
- links (more in-depth details about found resources), etc.

Searching results (video)

Click to play!

What's in hands

- infrastructure for cataloging data/information/service resources by any PICES member/expert group
- about four thousand metadata records (mostly from the PMFP)
- harvesting from the PICES TCODE, KODC and TINRO catalogs
- a metadata contributor is able to complete all required metadata fields pretty fast with the use of filled templates and thesauri but it may take much preliminary technical preparation
- files and links may be attached to metadata records
- catalog resource holders keep full control over their metadata records
- peer-review process is supported
- a mean for the resource (data/information/service) citation is provided

Challenges

- the catalog service is a very sophisticated tool but in no demand in the PICES community
- just one catalog mostly as a proxy for a draft PMFP repository
- several possibilities for promoting data/information/services sharing could be explored
 - cataloging all PICES generated data/information/data products/services and using for references, e.g.,
 - the PICES data inventory could be implemented as a part of PTC-2
 - FUTURE may create a searchable catalog of all its products as a finalizing task

Challenges (Contd.)

- - PICES may use this service in implementation of the next integrative program oriented towards the UN Ocean Decade (where providing public access to data and information is one of top priorities)
 - volunteers from member countries may polish up/update collected records from the PMFP in the ISO 19115/19139 standard
- data/information/services sharing issues should become an essential part of the curriculum for all PICES-sponsored summer schools and training courses

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