



MIISTAKIS INSTITUTE
FOR THE ROCKIES

Developing Metadata Framework for Crown of the Continent Ecosystem
Final Report
December 15, 2007

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Project Number: UC-1

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Please see: <http://www.rockies.ca/chameleon/cmp/>

One of the main goals included in the CMP Strategic Plan is to improve data sharing and methodology standardization across the Crown of the Continent Ecosystem. The development of a metadata framework was identified as an efficient and effective way to address this goal by providing access to GIS metadata and reference materials available throughout the Crown region. The Miistakis Institute was retained to develop a web-based metadata framework.

The CMP data framework initial prototype is on line in draft form, and consists of a website portal designed to help share information -- or links to information -- with other partners in the CMP. All data included in the framework are spatially searchable, along with the normal keyword style of search. The system was designed to host various bibliographic records with a priority on grey literature, links to external web based information (i.e., links to existing reports on other websites), and metadata for spatial layers (with information on how to obtain these data).

The database currently searches approximately 11,000 records, in four different databases. All data included in the framework is spatially searchable where feasible, along with the normal keyword style of search. Recognizing that this represents the completion of the prototype, there are many databases that have been identified that Miistakis is currently working on to include in the Framework. These include Nature Bib, ENRIS database, STORET and publications from the Flathead Biological Station.



The tool is continually refined based on agency user input, and use of the portal will be promoted amongst the agencies, including a presentation of the framework at the CMP Ecological Health Workshop on Jan 30/31 in Cranbrook, B.C. and at the CMP Forum on March 5/6 in Whitefish, Montana.

The following slide deck summarizes the major components of the metadata framework prototype. This prototype has been presented to the Crown Managers Partnership (CMP) Steering Committee and a CMP sub-committee has been formed to identify priorities for the next phase of the Framework development.

Project purpose

- CMP Strategic Plan goals includes improving data sharing and methodology standardization across the Crown
- Development of a metadata framework will address this by providing access to GIS metadata and reference materials available throughout the Crown





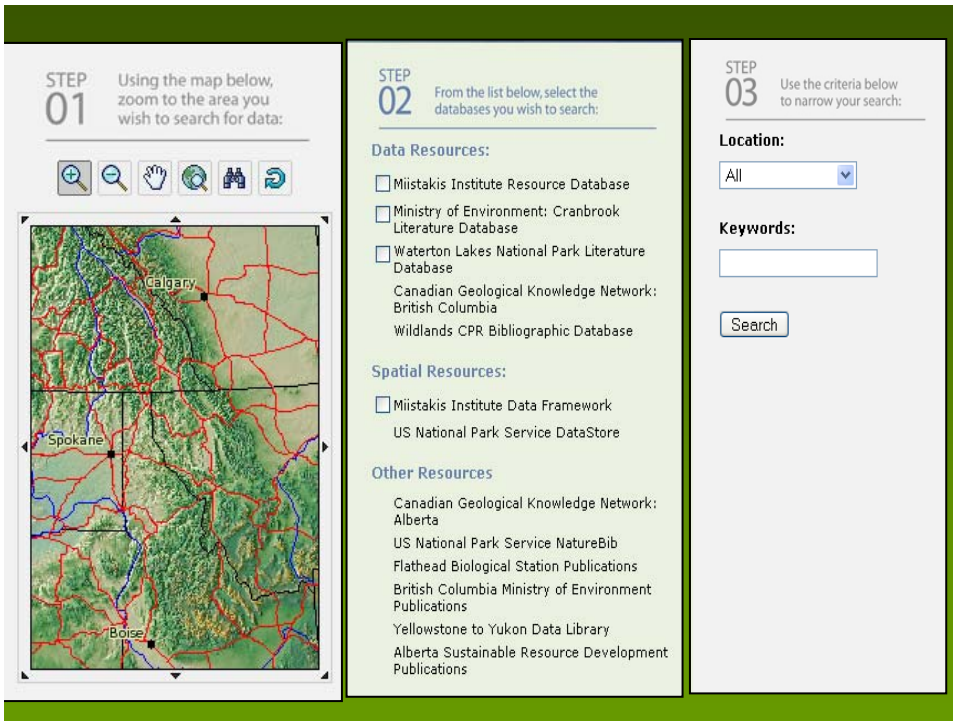
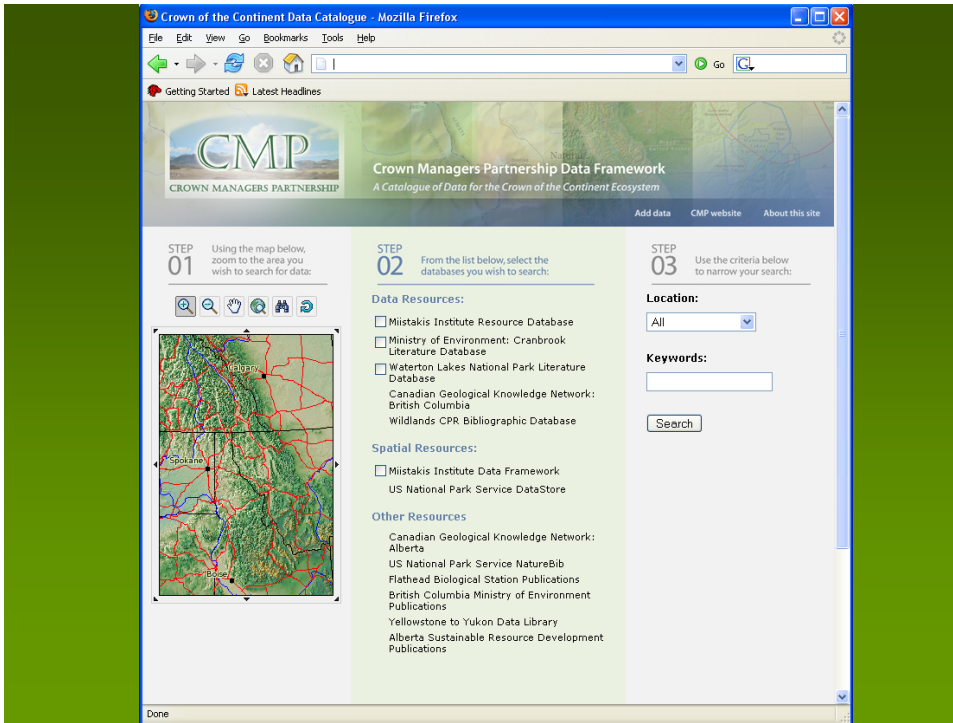
Data framework

- CMP data framework consists of a website portal designed to help share information, or links to information, between partners in the CMP
- Currently many databases already exist within the Crown of the Continent Ecosystem meeting the needs of their respective organizations
- The purpose of the web catalog is to provide an interface to search each of these individual databases across the internet allowing organizations to retain ownership and control of their respective datasets while improving access for all



Operationalizing the framework

- The CMP Data Framework is a web based search service designed to query GIS and Literature databases relevant to the Crown of the Continent Ecosystem
- The database currently searches ~11,000 records, in four different databases. On the horizon we expect to add at least three more databases
- All data included in the framework will be spatially searchable where feasible, along with the normal keyword style of search





Search Summary

	displayed/total
Miistakis Institute Grey Literature:	206/206
Ministry of Environment: Cranbrook Literature:	94/263
Waterton Lakes National Park Literature:	0/104
Miistakis Institute GIS Data:	0/
Total records:	573

- 1 Rocky Mountain Subalpine-Montane Fen Ecological System**
Concept Summary: This system occurs infrequently throughout the Rocky Mountains from Colorado north into Canada. It is confined to specific environments defined by ground water discharge, soil chemistry, and peat accumulation of at least 40 cm. Most fens in the Rocky Mountains are considered Inte...
URL: http://www.natureserve.org/getData/pdf/rocky_mtns/Rocky_Moun...
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URL: http://www.natureserve.org/getData/pdf/rocky_mtns/Rocky_Moun...

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Database Search Result - Mozilla Firefox
http://www.rockies.ca/chameleon/cmp_show.php?database=cmp_metad=9

CMP
CROWN MANAGERS PARTNERSHIP
A Catalogue of Data for the

Title: Rocky Mountain Subalpine-Montane Fen Ecology
Author(s): Rocchio, Joe
Publisher: Colorado Natural Heritage Program
Date: December, 2005
Abstract: Concept Summary: This system occurs infrequent Rocky Mountains from Colorado north into Canada specific environments defined by ground water chemistry, and great accumulation of at least 40 Rocky Mountains are considered Intermediate to this system includes extreme rich and iron fens, rare. Fens form at low points in the landscape or ground water intercepts the soil surface. Ground maintain a fairly constant water level year-round near the surface most of the time. Constant high accumulation of organic material. In addition to and perennially saturated soils, the extreme rich distinct soil and water chemistry, with high level minerals such as calcium, magnesium, or iron. F a mosaic of several plant associations dominate (Carex aquatilis), beaked sedge (C. utriculata), mud sedge (C. limosa), woollyfruit sedge (C. lasiocarpa), bog birch (Betula nana), Bellard's bog sedge (Scheuchzeria palustris), simple bog sedge (S. simpliciuscula), and Rolland's bulrush (Trichophorum pumilum). Sphagnum spp. (moss) is indicative of iron fens while calcareous mosses occur in extreme rich fens. The surrounding landscape may be ringed with other wetland systems, e.g., riparian shrublands, or a variety of upland systems from grasslands to forest.

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IBSN:
Other: Source Title: Series Title:
Storage Location: archive\CMPdocuments\Indicators_Water\Rocky_Mountain_Subalpine-Montane_Fen_assessment.pdf
URL: http://www.natureserve.org/getData/pdf/rocky_mtns/Rocky_Moun...

Library Information:
Miistakis Institute library is not a lending library, but materials may be viewed in office during normal business hours with an appointment. Please contact Miistakis at: institute@rockies.ca or 403-220-8968.


For any items with listed alternate storage locations, please contact them directly.

http://www.rockies.ca/chameleon/xml/xmlmerg.asp?xmlfile=framework_45edd7f135e4f.xml&xlnum=3 - Microsoft...

View full FGDC metadata
View FAQ FGDC metadata

Generalized Alberta Landcover
Shapefile

Description Spatial Attributes Obtain Data



Keywords
Theme: I07, Cropland, Forage, Grassland, Shrubs, Trees, Wetlands, Water bodies, Other lands, Mud, Sand, Saline, Land Use, Land cover, Landcover
Place: Western Canada, pf, wc
Temporal: 1993-2001

Description
Abstract
The Landcover Generalization process was undertaken to solve rendering problems of the original vectorized landcover data due to its unwieldy/overwhelming size. LANDSAT 7 imagery used in the process was collected during the WGTPP. This landcover imagery has a 30 meter resolution and is stored in over 1,100 vectorized 1:50,000 map sheet tiles. The data requires over seven gigabytes of disc space. If the user wishes to view a specific area, they must identify the 1:50,000 map sheet, then browse to the desired mapsheet. Due to the great detail, this vector product (102 in GIS_LIB) becomes computationally impossible on the desktop computer when multiple mapsheets are drawn. Spatial analysis and modeling at provincial or western Canada extents are also impossible in the mapsheet format.



Next steps

The initial prototype phase of the project is complete. Phase II, as included as part of the Crown Managers Partnership 2007/2008 workplan includes the following steps:

- Design a process to obtain information from agencies as to what issues/needs the portal can address
- Meet with internal agencies representatives
- Promote ongoing use of the portal
- Refine portal functionality based on user input
- Identify additional databases which includes identifying additional data sources

A CMP Metadata Framework sub-committee has been formed (including Rich Moy, Bill Dolan, Erin Sexton, Tracy Lee and Ken Sanderson) to move forward with the next phase of the framework development. The following one-pager has been created to distribute to all CMP members to inform participants of the framework and to request databases and spatial datasets to include in the framework.



Crown Managers Partnership Information Management System

www.rockies.ca/chameleon/CMP

WE NEED YOUR HELP

A prototype of the system has been developed and we are now linking to resources through-out the Crown.

If you are aware of a database or spatial dataset that could be included in the CMP Information Management System please contact:

Ken Sanderson
Miistakis Institute
ken@rockies.ca

The *Crown Managers Partnership* has developed an on-line data framework to assist the partnership in managing spatial and reference information across this unique landscape.

The Crown Data Framework is unique because it links a transboundary Community of Practice (including resource managers throughout the Crown of the Continent) with a variety of content providers through the use of standards-compliant distributed technologies. The tool therefore does not house the resource information but links to and enables queries from multiple databases within the Crown. Data management follows an open standards approach to ensure that all information can be easily discovered, accessed and used. The data framework enables the consolidation and coordination of selected environmental and resource management related information held by resource management agencies in the Crown.

STEP 01 Using the map below, zoom to the area you wish to search for data:

STEP 02 From the list below, select the databases you wish to search:

STEP 03 Use the criteria below to narrow your search:

Location: All

Keywords:

Data Resources:

- Mistakus Institute Resource Database
- Ministry of Environment: Cranbrook Literature Database
- Waterton Lakes National Park Literature Database
- Canadian Geological Knowledge Network: British Columbia
- Wildlands CPR Bibliographic Database

Spatial Resources:

- Mistakus Institute Data Framework
- US National Park Service DataStore

Other Resources

- Canadian Geological Knowledge Network: Alberta
- US National Park Service NatureBib
- Flathead Biological Station Publications

Search

On-Line interface of CMP Data Framework Tool

The design of the information management system will help demonstrate the value of distributed and local technologies to decision-making at several levels. The design of the system architecture incorporates the following tools and services;

- appropriate web service solutions to connect repositories of distributed geospatial (landform, vegetation, water, and soils), and land use data (protected areas, ecological status and thematic maps including species occurrences, probability surfaces, historical fire and flood regimes etc.).
- Incorporate a citation reference tool providing access to documents including reports, manuals, guides, status reports and research findings. These documents are usually created in-house and are typically hard to find and difficult to access.
- Provide a range of search types (geospatial, keyword and theme) and appropriate security measures.