

Pacific Coastal Resources Atlas for British Columbia

URL: http://www.shim.bc.ca/atlasses/Coastal/Coastal_public.htm

URL: (souther gulf islands): <http://www.shim.bc.ca/atlasses/gulfislands/>

Purpose of application

The Pacific Coastal Resources Atlas (PCRA) for British Columbia, Canada, was developed in response to the expressed need for an easily accessible information source that can be used by anyone with an interest in Coastal Marine Resources Planning. Government agencies, Regional and Community Governments and NGO's are able to access the best available coastal resources datasets; all interest groups will be "working from the same page" of information. The system allows authorized users to add new information (in a timely manner) as it becomes available using "on-line" data entry tools.

To date, both freshwater and coastal resources fishery information has been housed in a huge variety of data warehouses; some of these are digital, some are available in hardcopy form only, and much of our coastal resources knowledge still remains in the form of unwritten Traditional Ecological Knowledge. Amalgamating these sources around a single access point (using access agreements and links to a variety of data servers) will streamline coastal planning processes. The benefits to Governments and Communities are significant; requests for existing information from Government agencies will be greatly reduced (with associated cost savings) – community members will have a greater sense of ownership and stewardship of natural resources and will be better informed when resource use conflict decisions are being made.

A number of government and non-government web sites distribute selected coastal resources data and maps specific to a particular species or habitat. The data presented is often in different formats and, on occasion, may not be consistent. The Community Mapping Network (CMN) initiative is presently the only system that allows password-authorized entry of new information using web-based mapping tools. Although there is a lot of information about British Columbia's coastal resources in the various data warehouses, there is a much larger area of the BC coast for which no information exists! The cost of doing detailed surveys in this huge coastal area would be phenomenal, (at a recent conference at the Institute of Ocean Sciences one participant estimated it would take 60+ years using the best available technology just to accurately map the BC coastal seafloor and inshore). The ability to map additional coastal resources using local knowledge (including new agency-sourced information) will greatly assist BC residents in making responsible resource use decisions.

The importance of metadata used in the PCRA approach is stressed. Online tools allow for the input of new information that come from a variety of sources with an associated variety of accuracy, (as is the case with most existing information sources). The system allows anyone who views the maps and data reports to review the sources of the information and the relative accuracy of the observations. As time goes on, any information that has not been adequately field-truthed will be subjected to more detailed examination and up-dated appropriately. In the meantime, "suspected presence" (of any species or habitat) is better than no information at all as coastal resource use planning decisions are being considered.

The Pacific Coastal Resources Atlas is designed to streamline the collection and dissemination of marine habitat and fishery resource information for coastal BC. The goal of the system is to create an easily accessible source of spatially georeferenced marine habitat and resource information. Although the individual databases and GIS layers may reside on different computers

in a range of agency data warehouses, the PCRA system is designed to make all of the information accessible to information users and providers at one specific location through the internet.

There are many uses for spatially georeferenced marine habitat and fishery information. Some examples of the business needs for this information include:

- Habitat referrals for foreshore leases and licences;
- Oil spill contingency planning and response;
- Community shoreline planning and zoning;
- Provincial coastal planning;
- Provincial and Federal Marine Protected Area analysis;
- Fisheries research which looks for correlation of marine resources with habitat.

The Pacific Coastal Resources Atlas is available through the Community Mapping Network at www.cmnbc.ca (CMN). The Community Mapping Network was created to share a wealth of natural resource information and maps with communities in British Columbia, Canada. Government and community natural resource information is integrated and made accessible through a user friendly, interactive mapping system called Autodesk Mapguide. A series of servers are utilized to share the workload for serving province-wide topographical base maps, high resolution orthophotography, Charts and selected resource information. Maps and natural resource information are “web-served” to assist communities and local governments with landuse planning, to promote conservation and protection of sensitive habitats and to raise awareness and respect for ecological values.

Geographic extent

Coverage includes the entire coast of British Columbia, but many data sets are site specific. For example some data is from Washington State while others are for species and habitats for only certain areas.

Target audience

Target audience: the public, local and senior governments, First Nations, Industry, Stewardship Groups.

Data included (general categories)

Categories include: coastal shorezone mapping, herring spawn, significant concentrations of fish and invertebrates, anecdotal information for commercial, aboriginal and sport fisheries, salmon migration routes, fish habitat features including kelp, eelgrass, salt marshes, tidal flats, marine mammal sightings, distribution of fisheries based on commercial landings, clam beds, rare and endangered species and other layers.

Distinguishing features

Over 30 online data entry tools are available with username and password protection. Links to shoreline video and still photos are available for the southern Gulf islands. The site is hosted by a non profit organization.

Technology

Autodesk Mapguide, microsoft access, Drupal content management system, clipstream video player.

Atlas support

Support for atlas development is opportunistic for adding new data and new functionality. No specific funding for ongoing support and management is available.

Challenges encountered

Challenges include funding, getting updates, consolidating information, collecting new information in the field, getting people to use the atlas and understand its value. Also, a challenge is to link information sources together so users can better understand trans-boundary issues such as oil spill impacts.

Lessons learned

Oline data entry tools are not being used as initially envisioned, and there has not been enough communication about the value and existence of the existing systems.

Future directions

The application is currently being re-formatted into a new "open source" version of Autodesk mapguide. More focus will be placed on data collection where there is interest such as sand lance and eelgrass and contaminants mapping and specific areas of the coast where projects need support such as the Strait of Georgia and PNCIMA areas. Use of oblique still photos is being considered.

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