

Team Mystic

By Cathryn Brandon

CORAL Group

Department of Geography,

University of Victoria

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ESRI 2015 Map App Challenge: Enjoy Your Coast BC Map App

Mission Statement:

Despite Canada having the world's longest coastline, marine areas are poorly protected compared to terrestrial areas in Canada (1). As of 2013, up to 10% of Canada's terrestrial areas were protected while only 0.9% of Canada's marine waters were protected (2). This represents a shocking disparity when considering the Convention on Biological Diversity encouraged member countries to protect at least 10% of their marine waters by 2020, and 17% of their terrestrial areas by that year (1).

Unfortunately Canadians are ill informed when it comes to marine protection. Although 30% of Canadians and 49% of British Columbians have heard the term National Marine Conservation Areas, only 3% of Canadians surveyed could name a National Marine Conservation Area, in a 2009 Parks Canada study (3). Only 2% of Canadians had actually visited a National Marine Conservation Area. This is unfortunate as studies demonstrate that individuals with strong place attachment and place values exhibit greater place-protective behaviours (4, 5).

By enjoying and appreciating our coasts we can develop deeper connections to these places. This increased valuation will hopefully lead to us having stronger place-protective behaviours, encouraging us to support protection of our marine environments and encouraging us to have stronger environmentally responsible behaviours when we are out on the water. It is important for us to recognize that our behaviour towards our seascapes can be a function of direct behaviour, such as anchoring responsibly away from sensitive eelgrass beds or packing out our litter; as well as, indirect behaviour, such as signing petitions in support of marine conservation (6). Both of which contribute to a strong environmental ethic towards marine environments.

Map App:

This map application will introduce you to various recreational activities in coastal BC, specifically parks and protected areas, scuba diving, recreational boating, and kayaking. Two buffers centered on Victoria, BC are included to give you a visual concept of the disparity between total amounts of terrestrial protected areas in Canada versus that of marine protected areas. Various widgets are available for your use

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which will allow you to explore marine tourism and recreational opportunities provided by the provincial and federal levels of government. It is hoped that this app will encourage users to learn about and enjoy their coastal seascapes, while being acutely aware of their own environmental behaviour while out on the water; and ultimately encourage place-protective behaviours towards BC's coasts and support of marine protected areas.

Map App Challenge Guidelines:

The map app challenge required the following:

1. Use of **open spatial data** to develop an app
2. Developed around some **aspect** (delivery, access, quality, maintenance, impact, planning etc.) of **Government** (municipal and/or regional) **Services** in Canada
3. Developed around the following **themes**:
 - Housing
 - Health (human and/or animal/environmental)
 - **Parks and recreation**
 - Education including daycare
 - Public/private transport including infrastructure
 - Garbage collection/snow/branch removal
 - Emergency management
 - Information services (online information access and use)
 - Utilities

The *Enjoy Your Coast BC* map app meets the three guidelines in the following way:

1. Uses open spatial data downloaded from the BCMCA (British Columbia Marine Conservation Analysis) website which is a repository of marine spatial data in British Columbia. Their data can be viewed, accessed, and downloaded here: <http://bcmca.ca/maps-data/browse-or-search/>. Data on protected areas was also accessed from GeoGratis: <http://geogratis.gc.ca/geogratis/Home?lang=en>
2. The map app revolves around the access and planning (**aspect**) of tourism and recreation services provided by the Province of British Columbia and the federal Government of Canada who are responsible for managing parks and protected areas in the province (**government services at the regional level in Canada**).
3. The chosen **theme** relates to **Parks and Recreation**.

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References:

1. DFO (<http://www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/mpa-zpm/spotlight-pleinsfeux/index-eng.htm#s1>)
2. Environment Canada (<http://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=En&n=478A1D3D-1>)
3. Environics (2009). 2009 National Survey of Canadians: Final Report. Prepared for Parks Canada.
4. Ardoin, N.M. (2006). Toward an interdisciplinary understanding of place: Lessons for environmental education. *Canadian Journal of Environmental Education*, 11, 112-126.
5. Halpenny, E.A. (2010). Pro-environmental behaviours and park visitors: The effect of place attachment. *Journal of Environmental Psychology*, 30, 409-421. Doi: 10.1016/j.jenvp.2010.04.006
6. To sign a petition protection Canada's oceans, please visit CPAWS DARE TO BE DEEP campaign: <http://cpaws.org/campaigns/dare-to-be-deep> . *This page is not endorsed by CPAWS