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**COURSE OUTLINE**  
**Marine Protected Areas**

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**Office Hours:** Thursdays on request 5pm – 6pm | Location: in person or remote via zoom

**Schedule:** Thursdays 1830 – 2120

**Office Location:** TBD

**Contact:** [cshort@uvic.ca](mailto:cshort@uvic.ca)

**Remote class details:**



Meeting ID: [REDACTED]

Password: [REDACTED]

One tap mobile



**COURSE DESCRIPTION**

This class will focus on many elements inherent in marine protected area (MPA) design, governance, implementation, management, compliance, and monitoring. The course will cover foundational topics like ecosystem-based management and key ecological, socio-economic, and cultural considerations in the broader field of marine conservation. The practise of marine spatial planning will also be examined in relation to MPAs. There will be a focus on the Canadian context and on temperate MPAs in British Columbia specifically - international examples will also be drawn upon where applicable.

Subject to public health measures related to COVID-19, this course may be delivered in-person and / or remotely via zoom. Zoom sessions will be synchronous (i.e., delivered in real time) and will not be recorded. Students are expected to engage in discussions, Q & A's and surveys as facilitated via remote learning platforms.

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**REQUIRED TEXT(S)**

None

**RECOMMENDED TEXT(S)**

Selected readings by topic area recommended.

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## LEARNING OUTCOMES

At the end of the course, students will:

- Analyze and connect core principles in ecological and coastal zone management theory to practice;
- Critically evaluate MPA theory and management from an applied perspective;
- Be familiar with the variety of MPA applications and why they may differ from place to place;
- Examine the variety of tools and techniques used in the design and management of MPAs and assess their strengths and weaknesses;
- Hone their critical thinking, written and verbal communication skills through course assignments;

## EVALUATION

Students will be expected to carry out a variety of exercises including presentations, short papers and participate in class discussions. See Appendix one for description of assignments.

1. Briefing Note	20	February 10 <sup>th</sup> , 2022
2. Group Presentations	20	March 10 <sup>th</sup> – March 31 <sup>st</sup> 2022
3. Mid-Term Test	15	March 3 <sup>rd</sup> , 2022
4. Final Written Assignment - Proposal	35	April 7 <sup>th</sup> , 2022
5. Participation	10	
<b>Final</b>	<b>100</b>	

## GRADING SYSTEM

As per the Academic Calendar:

Grade	Grade point value	Grade scale	Description
A+	9	90-100%	<b>Exceptional, outstanding and excellent</b> performance. Normally achieved by a minority of students. These grades indicate a student who is self-initiating, exceeds expectation and has an insightful grasp of the subject matter.
A	8	85-89%	
A-	7	80-84%	
B+	6	77-79%	<b>Very good, good and solid</b> performance. Normally achieved by the largest number of students. These grades indicate a good grasp of the subject matter or excellent grasp in one area balanced with satisfactory grasp in the other area.
B	5	73-76%	
B-	4	70-72%	
C+	3	65-69%	<b>Satisfactory, or minimally satisfactory.</b> These grades indicate a satisfactory performance and knowledge of the subject matter.
C	2	60-64%	
D	1	50-59%	<b>Marginal</b> Performance. A student receiving this grade demonstrated a superficial grasp of the subject matter.
F	0	0-49%	<b>Unsatisfactory</b> performance. Wrote final examination and completed course requirements; no supplemental.
N	0	0-49%	Did not write examination or complete course requirements by the end of term or session; no supplemental.

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## **GEOGRAPHY DEPARTMENT INFO**

- Geography Department website: [uvic.ca/socialsciences/geography/](http://uvic.ca/socialsciences/geography/)
- Geography Department Chair: [geogchair@uvic.ca](mailto:geogchair@uvic.ca)
- Geography Undergraduate Advising: [geogadvising@uvic.ca](mailto:geogadvising@uvic.ca)

## **BRIGHTSPACE**

As needed

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## **POLICY ON LATE ASSIGNMENTS**

3% per day

## **POLICY ON ATTENDANCE**

Attendance will be recorded and reflected in participation evaluation

## **ACADEMIC INTEGRITY**

It is every student's responsibility to be aware of the university's policies on academic integrity, including policies on **cheating, plagiarism, unauthorized use of an editor, multiple submission, and aiding others to cheat.**

**Policy on Academic Integrity:** [web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html](http://web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html)

If you have any questions or doubts, talk to me, your course instructor. For more information, see [uvic.ca/learningandteaching/cac/index.php](http://uvic.ca/learningandteaching/cac/index.php).

## **ACCESSIBILITY**

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a documented disability or health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning (CAL) as soon as possible ([uvic.ca/services/cal/](http://uvic.ca/services/cal/)). The CAL staff is available by appointment to assess specific needs, provide referrals, and arrange appropriate accommodations. The sooner you let us know your needs, the quicker we can assist you in achieving your learning goals in this course.

## **POSITIVITY AND SAFETY**

The University of Victoria is committed to promoting, providing and protecting a positive and safe learning and working environment for all its members.

## **SEXUALIZED VIOLENCE PREVENTION AND RESPONSE AT UVIC**

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence

and its overall approach by visiting [uvic.ca/svp](http://uvic.ca/svp). If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR; Sedgewick C119  
 Phone: 250.721.8021  
 Email: [svpcoordinator@uvic.ca](mailto:svpcoordinator@uvic.ca)  
 Web: [uvic.ca/svp](http://uvic.ca/svp)

## COURSE EXPERIENCE SURVEY (CES)

I value your feedback on this course. Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. The survey is accessed online and can be done on your laptop, tablet, or mobile device. I will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

## WEEKLY CALENDAR

Course Schedule	Focused Topics <i>(subject to some change)</i>
<b>Week 1   Jan 13</b>	<ul style="list-style-type: none"> <li>• Introduction to Course</li> <li>• Class Roundtable, Group Assignments, Overview of assignments</li> <li>• The Big Picture               <ul style="list-style-type: none"> <li>○ Marine Ecology 101                   <ul style="list-style-type: none"> <li>▪ What are MPAs?</li> </ul> </li> </ul> </li> </ul> <p><b>Recommended Readings:</b></p> <ol style="list-style-type: none"> <li>1. Agardy, T. 2018. Justified ambivalence about MPA effectiveness. – ICES Journal of Marine Science, 75: 1183–1185.</li> <li>2. Worm, B, Barbier, E.B., Beaumont, N, Duffy, E.J., Folke, C, Halpern, B.S., and R. Watson. 2006. Impacts of biodiversity loss on ocean ecosystem services. <i>Science</i>, 314: 778-790.</li> <li>3. Halpern et al. 2012. An index to assess the health and benefits of the global ocean. <i>Nature</i>, 488 (7413): 615-20.</li> </ol>
<b>Week 2   Jan 20</b>	<ul style="list-style-type: none"> <li>• The Big Picture continued               <ul style="list-style-type: none"> <li>○ Ocean Economy</li> <li>○ Ocean Users</li> </ul> </li> <li>• Marine Ecosystem Based Management / Integrated Resource Management</li> <li>• Marine Spatial Planning – Case Study: <i>Marine Planning Partnership for the North Pacific Coast</i></li> <li>• Why MPAs?</li> </ul> <p><b>Recommended Readings:</b></p> <ol style="list-style-type: none"> <li>1. Leslie, H and K. McLeod, 2007. Confronting the Challenges of Implementation Marine Ecosystem Based management. <i>Frontiers in Ecology and the Environment</i>, 5(10): 540-548</li> <li>2. Diggon, S., Short, C., Bones, J., Smith, J., Dickinson, M., Wozinack, K., Topelko, K., and K. Pawluk. 2020. The Marine Plan Partnership for the North Pacific Coast – MaPP: A collaborative and co-led marine planning process in British Columbia. <i>Marine Policy</i>, 104065.</li> <li>3. Peruse this website: Marine Planning Partnership: <a href="http://www.mappocean.org">www.mappocean.org</a></li> <li>4. Ban, Natalie C., Karin Bodtker, David Nicolson, Carrie Robb, Krista Royle, Charlie Short. 2013. Setting the stage for marine spatial planning: ecological and social data collation and analyses in Canada’s Pacific waters. <i>Marine Policy</i>, 39:11-20</li> </ol>
<b>Week 3   Jan 27</b>	<ul style="list-style-type: none"> <li>• Types of MPAs</li> <li>• Different MPAs for Different Contexts</li> </ul>

	<ul style="list-style-type: none"> <li>• Benefits and challenges of MPAs <ul style="list-style-type: none"> <li>○ Economic, Social, Cultural, Ecological</li> </ul> </li> <li>• MPA Effectiveness and Implications</li> <li>• Overview of MPA management issues and challenge</li> </ul> <p><b>Recommended Readings:</b></p> <ol style="list-style-type: none"> <li>1. Agardy, T., Claudet, J., and Day, J. 2016. Dangerous targets revisited: old dangers in new contexts plague marine protected areas. <i>Aquatic Conservation: Marine and Freshwater Ecosystems</i>, 1–15</li> <li>2. Edgar, G. J., Stuart-Smith, R. D., Willis, T. J., Kininmonth, S., Baker, S. C., Banks, S., Barrett, N. S., et al. 2014. Global conservation outcomes depend on marine protected areas with five key features. <i>Nature</i>, 506: 216–220.</li> <li>3. Lester and Halpren, (2008). Biological responses in marine no-take reserves versus partially protected areas. <i>Marine Ecology Progress Series</i>, 367: 49-56.</li> <li>4. White et al., 2013. A comparison of approaches used for economic analysis in marine protected area network planning in California. <i>Ocean &amp; Coastal Management</i>, 74: 77-89.</li> </ol>
<b>Week 4   Feb 3</b>	<ul style="list-style-type: none"> <li>• MPA Design – techniques, tools &amp; assessments</li> <li>• MPA Networks</li> </ul> <p><b>Recommended Readings:</b></p> <ol style="list-style-type: none"> <li>1. Sala et al., 2002. A general model for Designing Networks of Marine Reserves. <i>Science</i>, 298: 1991-1993.</li> <li>2. Gleason, et al., 2013. Designing a network of marine protected areas in California: Achievements, costs, lessons learned, and challenges ahead. <i>Ocean and Coastal Management</i>, 74: 90-101.</li> <li>3. Canada-British Columbia Marine Protected Area Network Strategy. 2014. ISBN: 978-1-100-21129-9.</li> </ol>
<b>Week 5   Feb 10</b> <i>Briefing Note Due</i>	<ul style="list-style-type: none"> <li>• MPA Governance – International Synopsis</li> <li>• MPA Governance in Canada</li> <li>• MPA Governance in British Columbia</li> <li>• Current Challenges</li> </ul> <p><b>Recommended Readings: <i>Executive Summary from IUCN document:</i></b></p> <ol style="list-style-type: none"> <li>1. Borrini-Feyerabend, G., Dudley, N., Jaeger, T., Lassen, B., Broome, N.P., Phillips, A., 2013. Governance of Protected Areas: From Understanding to Action, in Best Practice Protected Area Guidelines 20. IUCN, Gland. <a href="https://www.iucn.org/sites/dev/files/content/documents/governance_of_protected_areas_from_understanding_to_action.pdf">https://www.iucn.org/sites/dev/files/content/documents/governance_of_protected_areas_from_understanding_to_action.pdf</a>.</li> </ol>
<b>Week 6   Feb 17</b>	<ul style="list-style-type: none"> <li>• MPAs in BC and Canada (guest lecture possible) <ul style="list-style-type: none"> <li>○ History, progress and challenges</li> <li>○ Temperate MPAs</li> <li>○ Canadian case study</li> </ul> </li> </ul> <p><b>Recommended Readings:</b></p> <ol style="list-style-type: none"> <li>1. Whitaker, A. 2014. Marine Protected Areas in Canada: A Comparative Law Analysis of the Nova Scotia and British Columbia Experience. <i>Ocean yearbook</i>, 28(1): 245-268</li> <li>2. Council of the Haida Nation and Her Majesty the Queen in Right of Canada, represented by the Chief Executive Officer of Parks Canada, 2018. Gwaii Haanas Gina 'Waadluxan KilGuhlGa Land-Sea-People Management Plan PDF: R64-464/2018E-PDF ISBN: 978-0-660-27508-6</li> </ol>
<b>Week 7   March 3</b> <i>Mid-Term Test</i>	<b>Mid-Term Test</b>
<b>Week 8   March 10</b>	<ul style="list-style-type: none"> <li>• MPAs and Communities (<i>guest lecture possible</i>) <ul style="list-style-type: none"> <li>○ Values, perceptions and social impacts of MPAs</li> <li>○ Indigenous (First Nations) people and MPAs</li> </ul> </li> </ul> <p><b>Recommended Readings:</b></p> <ol style="list-style-type: none"> <li>1. Ban, N., E. Wilson, and D. Neasloss. 2019. Strong historical and ongoing indigenous marine governance in the northeast Pacific Ocean: a case study of the Kitasoo/Xai'xais First Nation. <i>Ecology and Society</i>, 24(4):10. <a href="https://doi.org/10.5751/ES-11091-240410">https://doi.org/10.5751/ES-11091-240410</a></li> <li>2. McNeill, A, Clifton, J and E. S.Harvey. 2018. Attitudes to a marine protected area are associated with perceived social impacts. <i>Marine Policy</i>, 94:106-118</li> </ol> <p><b><i>Class Presentations   Round 1</i></b></p>

<b>Week 9   March 17</b>	<ul style="list-style-type: none"> <li>• MPAs – The Art of Engagement and Process Design <ul style="list-style-type: none"> <li>○ Who needs to play ball?</li> <li>○ Critical components to success</li> </ul> </li> </ul> <p><b>Recommended Readings:</b></p> <ol style="list-style-type: none"> <li>1. Kelly, R., Pecl, G., and A. Fleming. 2017. Social licence in the marine sector: a review of understanding and application. <i>Marine Policy</i>, 81: 21-28</li> <li>2. Fox et al., 2013. Enabling conditions to support marine protected area network planning: California’s Marine Life Protection Act Initiative as a case study. <i>Ocean &amp; Coastal Management</i>, 74: 14-23</li> </ol> <p><b>Class Presentations   Round 2</b></p>
<b>Week 10   March 24</b>	<ul style="list-style-type: none"> <li>• Management of MPAs and Challenges <ul style="list-style-type: none"> <li>○ Role of Education, Awareness, and Capacity Building</li> <li>○ Compliance and Enforcement</li> </ul> </li> </ul> <p><b>Recommended Readings:</b></p> <ol style="list-style-type: none"> <li>1. Day, J. 2008. The need and practice of monitoring, evaluating and adapting marine planning and management—lessons from the Great Barrier Reef. <i>Marine Policy</i>, 32: 823–831.</li> <li>2. Ban, N. C., Kushneryk, K., Falk, J., Vachon, A., and Sleigh, L. 2019. Improving compliance of recreational fishers with Rockfish Conservation Areas: community–academic partnership to achieve and evaluate conservation. – <i>ICES Journal of Marine Science</i>, doi:10.1093/icesjms/fsz134.</li> <li>3. McCook et al., 2010. Adaptive Management of the Great Barrier Reef: A globally significant demonstration of the benefits of networks of marine reserves. <i>Proceedings of National Academy of Sciences</i>.</li> </ol> <p><b>Class Presentations   Round 3</b></p>
<b>Week 11   March 31</b>	<ul style="list-style-type: none"> <li>• Course Wrap Up and Summary</li> <li>• Applications in the field</li> <li>• Final Evaluation</li> <li>• Q &amp; A on Proposals</li> </ul> <p><b>Class Presentations   Round 4</b></p>
<b>Week 12   April 7</b>	<b>Final Paper Preparation (your time)</b>

## DISCLAIMER

The above schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances.

## NOTE:

A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

Counselling Services - *Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students.* [uvic.ca/services/counselling/](http://uvic.ca/services/counselling/)

Health Services - *University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives.* [uvic.ca/services/health/](http://uvic.ca/services/health/)

Centre for Accessible Learning - *The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations* [uvic.ca/services/cal/](http://uvic.ca/services/cal/). *The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.*

Elders' Voices - *The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.* [uvic.ca/services/indigenous/students/programming/elders/index.php](http://uvic.ca/services/indigenous/students/programming/elders/index.php)

## Appendix 1 Course Assignment Instructions

### 1. Briefing Note

#### **Briefing Note Assignment**

Prepare a two-page briefing note on a major report using the format below. The document will be worth 20% of the total course mark and is due by 1830 Thursday, February 10<sup>th</sup>, 2022 (i.e., prior to class). Use the font style and font size from the format.

#### **Purpose:**

The purpose of the assignment is to learn and demonstrate the ability to comprehend a complex document and to communicate critical information and its implications in a clear and concise manner.

#### **The Scenario:**

Developing your scenario is very important! Imagine that you are working for an organization involved in oceans and coastal resource management – including MPA establishment and management. This organization can be in the public, private or not-for-profit sectors. For example: a government agency at a specified level, a private enterprise business, an industry or trade association, or a not-for-profit organization such as an environmental advocacy group. You are a lower-level research officer within the organization and have been asked, on very short notice, to read and summarize a large and complex report that will be released the following day, for a senior decision maker in the organization. The person you are writing for could be as high up as the Chairman of the Board, the Chief Executive Officer or your direct boss; you decide. At the appropriate places in the format provided, specify the name of your organization, your name and your imaginary title, and the name and title of the person that it is being prepared for. It's VERY IMPORTANT that you establish your scenario, both on paper in the briefing note, and in your own mind.

#### **Suggested Reports:**

*Students are free to review a report of interest to them and it should be relevant to the course material - please check with me first.*

#### **Five example reports are below:**

##### **1. WWF Comparison of Wild Fisheries Certification Schemes (2012)**

[WWF Review of Fisheries Certification Schemes 2012.pdf](#)

##### **2. Ocean Plastic Footprint (IUCN 2020)**

<https://portals.iucn.org/library/sites/library/files/documents/2020-001-En.pdf> (Links to an external site.)

##### **3. SeaStates Report on North America's Marine Protected Areas (CPAWS and Marine Conservation Institute 2016)**

[CPAWS Dare to be Deep Report Card on MPAs 2016.pdf](#)

##### **4. A Blueprint for Ocean and Coastal Sustainability (UNESCO 2011)**

[Blueprint for Oceans and Coastal Sustainability.pdf](#)

##### **5. Ocean deoxygenation: everyone's problem (2019) - <https://portals.iucn.org/library/node/48892>**

**Hints:**

- You probably don't have to read the whole report, that's what Executive Summaries are for, but you should at least browse the whole thing.
- Try to find out some background on the report, look for press releases or reactions at the time that it was released. If you can, dig into the background of the authors a bit.
- "Fly the plane at the right altitude"; you are expected to be the expert, but don't get lost in detail. Only communicate the key information to the senior decision maker in your organization that they need to know. You are reading the report for them.
- This is a real-life assignment that happens all the time in any organization. Have fun.

***The required format for the Briefing Note and detailed instructions for completing it are on the next page. Please follow the format and instructions as closely as you can.***



**Required Format – Please Follow.**

**Note:** Briefing documents are limited to 2 pages maximum, 11 pt font size (delete all instructions like this in your final note)

**PREPARED FOR:** [insert name and title of person from your scenario - who the b/n is being prepared for] (For Example: *Honourable XXX, Minister of XXX or XXX, CEO for XXX*)

**TITLE:** Concise title to reflect the issue (limit number of words to under 10), a busy person should be able to glance at this title among a pile of papers on his desk and know what it is about without having to refer to the whole document.

(For example: *“UN FAO Review of Global Overfishing”*)

**PURPOSE:** Briefly state (approx. 20-30 words) the reason for the briefing document and why it is important to the reader; tell them why they need to spend their busy time reading it. (For Example: *To brief the CEO on the main contents and findings of the FAO Report on Global Overfishing prior to its release*)

**BACKGROUND:**

This is the descriptive section. Briefly describe the report under review, who prepared it and why. You might want to do some background research here. Summarize the contents, main findings and conclusions so that the reader will know most of what the report says without having to read it for themselves. This should occupy most of the first page and, possibly, a small portion of the second page, and would be about a half to two thirds of the content of the briefing note. Use indented bullet format for this and remember, facts only here.

- Like this.....

**ANALYSIS/IMPLICATIONS:**

This is the analytical section. Review the implications of the report’s findings for the organization that you are a part of that you have established in your scenario. Analyze the potential impact for your organization and the likely reaction from interested parties of relevance to your organization. In the FAO Report example, if the report is to be released publicly and your organization will be affected by it, what will the report mean to reader and what might they have to do? Some outside research might be helpful here. Write this section in parenthetical style – no bullets.

**CONCLUSION/RECOMMENDATIONS:**

This is the action section. Provide concluding remarks and recommendations to the person(s) for whom the briefing note is prepared, including any specific actions required by them. If appropriate, you can include suggested speaking points that they can use. This section should be quite short and usually written in bullet or numbered format.

{Insert footnote to denote the author, job title and date}

## 2. Group Assignments (randomly assigned groups will be determined once class size settles)

- Your group is to present on MPAs in an assigned geography and you will need to research background on:
  - MPA proposals, key policies, strategies, legislation, science; and,
  - Pressures, issues and/or drivers for MPAs in that particular coastal/ocean environment.
- You will also take a deeper dive and choose a case study. This could be a specific MPA, set of MPAs, piece of legislation or policy, etc. You'll need to clearly articulate:
  - Who are the key players;
  - challenges;
  - successes; and,
  - current and future status of topic
- Finally, your group will need to summarize findings and offer some original thought that can lead into a broader class discussion.
- Ensure you corroborate your research and insights with peer reviewed literature and relevant background information – use references!
- You have **20-25 min** per group of four and **25-30 min** per group of five.
- You can use visual aids (i.e., power point, keynote, etc) and will submit the supporting materials as part of the assignment.
  - **MAX 10-12** slides

### How you and your group will be evaluated:

1. Individual mark assessment: / 4
2. Intro / context / background research / 4
3. Case study analysis / 8
4. Discussion / 4

**Total: / 20**

### 3. Final Paper Proposal

**Premise:** You have just been given an opportunity to apply for a \$75,000 CAD grant to do a research project on Marine Protected Areas. The grant can be used towards any type of research: social, cultural, institutional/administrative, economic, governance related, legal, biophysical, ecological, applied management and/or operational (see attachment 1 for examples/ideas).

You have two years to complete your work and write up a research report.

To access the grant however, you need to demonstrate that you can carry out such research and utilize the grant funds efficiently and effectively.

You are required to write a research proposal.

The research proposal should outline the following and be no longer than five, double-spaced, pages including a minimum of ten primary sources of literature cited. To save space, endnotes are recommended for references.

#### RECOMMENDED OUTLINE

1. Research proposal title
2. Key question to be asked “the proposal”
3. Background and literature review
  - a. Why important / context
  - b. Relevant related research
4. Proposed method of data collection and analysis
  - a. How are you going to get the information?
  - b. How are you going to determine the results?
5. Expected results
  - a. Based on similar research – what do you expect?
6. Contribution to field of research / Discussion / Conclusion
  - a. Succinct wrap up with future contributions

#### **Extra (not included in five-page proposal)**

7. Any maps, figures or tables that will help in proposal
  - a. Be sure to reference properly (e.g., Figure 1, Table 1, etc)
8. Appendix 1 – proposed budget (\$75K)
  - a. Must itemize your budget requirements over Year 1 and Year 2 (e.g., equipment, travel expenses, contracted support, analysis support)
9. Literature cited
  - a. Use in text endnotes and reference in this format:

Leisher, C., Mangubhai, S., Hess, S., Widodo, H., Soekirman, T., Tjoe, S., Wawiyai, S., Larsen, S.N., Rumatna, L., Halim, A. and M. Sanjayan. 2012. Measuring the benefits and costs of community education and outreach in marine protected areas. *Marine Policy*, 36 (issue #): 1005-1011.

## **Attachment 1 – Some example ideas for proposals**

### **Themes:**

#### Ecological

1. Determining effective ecological design criteria for MPAs
2. Demonstrating ecological benefits of MPAs
3. Are MPAs the most effective species/habitat conservation tool?
4. How effective are temperate MPAs?
5. What types of species/communities benefit most from MPAs?

#### Socio-cultural

1. Determining the key social / cultural barriers to MPA effectiveness.
2. Experimental MPA planning processes. What works best (i.e., most efficient)?
3. Are community based MPAs effective?
4. What are the indigenous equivalents to MPAs – do these exist and/or is there a difference. How are they managed?
5. Legislative reform for MPAs in Canada? What would this look like and why has Canada been so slow to establish MPAs compared to other countries?

#### Economics

1. Are MPAs a benefit or a detriment to local economies?
2. Which sectors benefit most from MPAs – why?
3. Do MPAs benefit the fisheries economy?
4. Effective tools to evaluate the economics of MPAs

#### Administrative

1. What are the most pressing challenges for MPA managers?
2. Effective tools for compliance and enforcement
3. Do voluntary compliance models/approaches work?
4. What are the key ingredients for visitor satisfaction?

#### Governance

1. A critical review of MPA legislation in Canada
2. How can MPA governance (or law) be more effective?
3. What are the challenges associated with MPA establishment?
4. A critical review of MPA governance – international comparison

How to set MPA objectives – international examples & effective process design