Special Problems in Environmental Management

http://www.meaning.ca/archives/archive/art_how_to_write_P_Wong.htm
How to write a research Proposal?

Why is a research proposal important?

one’s research is only as good as one’s proposal!!!

an ill conceived proposal dooms the project even if it get’s through the approval process (e.g. a thesis supervisory committee)

A research proposal is intended to:

• convince others you have a worthwhile research project
  you have competence to complete it
  you have work-plan to complete it (timelines, phase 1, 2,3)
• should contain all key elements involved in research process and include sufficient information for the reader to evaluate it
• proposal writing style: coherent, clear and compelling
What should a research proposal contain?

must address 3 questions: Why does this need to be conducted? What you plan to accomplish? How are you going to do it?

Title
concise, descriptive, catchy (avoid “An investigation of…”)
an effective title pricks the reader’s interest & predisposes him favourably towards the proposal

Introduction
provide necessary background/context for research problem
how to frame research problem perhaps the biggest problem

if research problem framed in context of general, rambling literature review
→ research question may appear trivial

if research problem framed in context of very focused and current research area
→ research questions significance will become evident
no rules on how to frame research questions
a lot depends on:
• creativity
• ability to think clearly
• depth of your understanding of problem areas
• place research question in context of a “hot” area/an older area that is still relevant
• provide a brief historical backdrop
• provide contemporary context to give it significance
• refer to the most relevant and representative publications

1. State the research problem, which is often referred to as the purpose of the study.
2. Provide the context and set the stage for your research question in such a way as to show its necessity and importance.
3. Present the rationale of your proposed study and clearly indicate why it is worth doing.
4. Briefly describe the major issues and sub-problems to be addressed by your research.
5. Identify the key independent and dependent variables of your experiment. Alternatively, specify the phenomenon you want to study.
6. State your objectives

7. Set the delimitation or boundaries of your proposed research in order to provide a clear focus.
8. Provide definitions of key concepts. (This is optional.)
Literature Review can be part of the introduction, but better to be separate

1. Ensures that you are not "reinventing the wheel".
2. Gives credits to those who have laid the groundwork for your research.
3. Demonstrates your knowledge of the research problem.
4. Demonstrates your understanding of the theoretical and research issues related to your research question.
5. Shows your ability to critically evaluate relevant literature information.
6. Indicates your ability to integrate and synthesize the existing literature.
7. Provides new theoretical insights or develops a new model as the conceptual framework for your research.
8. Convinces your reader that your proposed research will make a significant and substantial contribution to the literature (i.e., resolving an important theoretical issue or filling a major gap in the literature).

common mistakes

- Lacking organization and structure
- Lacking focus, unity and coherence
- Being repetitive and verbose
- Failing to cite influential papers
- Failing to keep up with recent developments
- Failing to critically evaluate cited papers
- Citing irrelevant or trivial references
- Depending too much on secondary sources
different ways to organize literature review

- use sub-headings → coherence
- tell story in a stimulating/engaging manner

Methods & Procedures

heart of proposal → shows how you will execute research problem
must contain sufficient information for reader to determine that methodology is sound & what possible sources of error?
some argue it should contain sufficient details for another qualified researcher to implement study
demonstrate knowledge of alternative methods to make case that your approach most appropriate to address question

- how do you plan to carry out your study (e.g. instruments)?
- who will do what in your study?
- what activities will be involved?
- how long does it take? (provide time schedule)
- you should have some idea about what data you will collect & how you will analyze them (ANOVA etc.)
Discussion

convince reader of potential impact of your proposed research
communicate a sense of enthusiasm & confidence (without exaggerating merits of proposal)
mention limitations and weaknesses of proposed research (time and/or financial constraints)
indicate how research will refine/revise/extend existing knowledge

common mistakes in Proposal Writing

1. Failure to provide the proper context to frame the research question.
2. Failure to delimit the boundary conditions for your research.
3. Failure to cite landmark studies.
4. Failure to accurately present the theoretical and empirical contributions by other researchers.
5. Failure to stay focused on the research question.
6. Failure to develop a coherent and persuasive argument for the proposed research.
7. Too much detail on minor issues, but not enough detail on major issues.
8. Too much rambling -- going "all over the map" without a clear sense of direction. (The best proposals move forward with ease and grace like a seamless river.)
9. Too many citation lapses and incorrect references.
10. Too long or too short.
11. Failing to follow the APA style.
12. Slopping writing.
what suggestions for subsequent research will arise from the findings?

**Format:** 2 page (references extra page)
- single spaced
- times new roman font (12)
- 1 summary paragraph for the public (do not exceed 300 words)

- Title
- Introduction
- Literature Review
- Methods/Procedures/Timelines
- Discussion