

U4735 Section Final Project: Description

Goals

The goals of this project are the following:

- To give the student practice in open ended problem solving: defining a problem to be solved, searching for data to address the problem and analyzing that data in a relevant way.
- To provide the student with an opportunity to explore her interests in specific environmental policy issues.
- To provide a stimulating exercise that will promote creativity, independence and resourcefulness in environmental problem solving.

It is my hope that this project will not cause undue stress on the student. While a modest lower limit on the scope of the project exists, it is largely up to the student to define the problem and solution. This is, in fact, an important part of the assignment: pose a question with a solution that is interesting and meaningful and, perhaps most importantly, possible to find with a reasonable amount of effort.

The Formal Assignment

You are a policy advisor to the US government. You have been assigned the task of performing a policy analysis on current environmental issues regarding ----- (*group decision: energy, health issues, resources, dams, pollution, etc.*) in the region of ----- (*group decision: China, Pakistan, Japan, USA, California, Mexico, South America, whole Earth, etc.*). You may work with one other student.

Your team must work together to decide how to solve the problem. Each member of the team should be responsible for one aspect of the solution and each aspect should be based on numerical data that you collect. You should primarily collect data off the web but you may also use other sources: newspaper or journal articles, correspondence with a government agency, an interview with a professor, etc. I will be happy to help you locate data resources. Each member of your team should analyze his data independently and then the group should discuss and modify these analyses together. The final report should be a cohesive unit.

On the final class period (or after, by appointment) you will present the results of your work in paper format. Your report will contain the following sections:

1. Introduction and background on geographical region including one map. (*1-2 pages per group, including the map*)

2. A clear and concise statement of the question that you will address in your presentation. A clear and concise statement of why a solution to this question is important. A short description of the part of the question addressed by each member of your team. *(1-2 pages per group)*
3. A graphical and/or tabular representation of the data collected as well as detailed information on their source. *(1-2 pages per person in the group)*
4. A clear and concise analysis of the data presented in terms of the environmental issues in question. Here you should try to be as objective as possible. Don't make policy suggestions. Just report on the data: what it is, what it implies, etc. *(1-2 pages per person in the group)*
5. A conclusion. The conclusion should state scientific, technological and policy advice on the issue. Here you should be subjective. State your opinion of what should be done given your analysis. The conclusion should also mention the time scales relevant to the problem and to the implementation of its solution. *(1-2 pages per group)*
6. A "bibliography" citing your data sources, describing their contents and providing enough information for future location and use of those sources. Include only references to data used in your project. *(1 page per group)*

Timetable

A timetable for completion of your project is given in table 1. This schedule should be regarded as a very strong suggestion. Some flexibility is possible if you discuss it with me in advance.

Personal and group summaries, to be handed in weekly as per the timetable, are only for the purpose of allowing me to keep up with your work and how it is progressing. They should also help to keep you on track. By follow this schedule you shouldn't have to spend too much time on the project in any given week during the planning phase. Please write the summaries by hand in the most abbreviated form possible. Don't spend more than 10 minutes writing a summary.

Suggestions

- *Posing a research question.* Choose a topic that interests you but also one that is not too complicated. You should have a quick look at web or other resources before you define your project too specifically to make sure that there is some good data on the subject that you are interested in.

Phase	Date	Completed work
Planning	Oct 31	Team chosen, Topic chosen.
	Nov 7	Geographic region chosen.
	Nov 14	Definite topic chosen based on prospective sources of data. Determine the overall research question and individual tasks. Have found at least one source of data per person. At least two sources of data per person found. Hand in personal summary detailing planned project.
Execution	Nov 21	Have met with instructor as a group. Begin analyzing data, making figures and map for presentation.
	Nov 28	Data analysis complete, figures and map complete. Bring figures and map to class.
	Dec 5	Draft of presentations due.
	Dec 5-10	Final presentation due.

Table 1: A timetable for the completion of the project.

- *Searching for data.* Use diverse resources but focus your efforts on the web. Look for newspaper articles (in any language), scientific journal articles (see science citation index), official government web sites and press releases, private sector web sites, environmental group web sites, etc. You can use <http://www.ldeo.columbia.edu/~katz/U4735stuff/links.html> as a taking-off point for web research.
- *Writing the report.* As your work progresses, keep a set of notes on your findings, ideas and plans that will serve as an outline when you have to write up the project. Choose the form of your final report (presentation, paper or web) according to the abilities of the members of your group.