



Environmental Science – Getting Started

Writing about Environmental Science consists of several components. Environmental science has many facets, including scientific considerations, public policy and political battles, psychology (such as e.g. the trauma of long-term evacuations due to disasters), international relations & diplomacy, economic implications, sustainable development, and even the built environment.

Professionals doing environmental work are found in many fields, just as environmental aspects touch many areas of life. The broad range of topics includes: medicine, toxicology, food supply safety and agriculture, public health, economics and sustainable development, public policy, conflict resolution (across national borders and interest groups), sociology, history, nature and historic architecture conservation, and more.

This class shows how to use the library's resources, find the the written works containing the needed information, regardless of the focus for the environmental aspect.

Distilling the idea down to a concise research question:

- [1] Most important: Step Number One: What is your research topic? What is it *about*?
- [2] Searching for articles, books, videos, and other library materials.
- [3] Organize your information to cover all aspects of your research paper.
- [4] Tying it all together: using the research resources and writing the paper.

Example – Suppose your topic is this:

The entire modern economic system is based on abundant and cheap energy, transportation, information technology (IT), globally linked financial intermediaries, as well as global political stability and climate stability. Yet this interconnectedness is vulnerable to any major climate disruption; human survival could be fragile in the wake of cataclysmic change. Your proposed solution is to hedge against the blow of a climate crisis that will make global transportation impossible by reintroducing local food production and domestic manufacturing powered by renewable energies.

How to dissect this topic and break it down into pieces for book/database searches:

I. What is this topic about?

- Agriculture (incl. food security, farming methods & their impacts) → Science databases
- Climatology → Science databases (databases listed pg.2)
- Ecology → Science databases
- Economic systems (incl. IT, global banking & transportation) → Business databases
- Policy (beware of partisan political opinion writings) → Mix of topics
- Renewable energy → Science databases, Business databases, Mix of topics
- Toxicology (incl. emissions & air pollution / atmospheric impact, soil & water contamination, environmental diseases and public health/medicine) → Science databases
- **Tip – finding articles:** for very complex topics, it is best to start by breaking down the topic into distinguishable knowledge areas, then searching specialized databases for each aspect. This way, you get at the many sides of a multifaceted topic in a manageable way.
- **Tip – finding books, videos etc:** All library-owned items are quickly found in the one QuickSearch search line on the library's home page (www.winthrop.edu/dacus).
- **Key to meaningful database & library book/video searches:** targeted search terms – use words specific enough to home in on the desired aspect.

II. Translating your topic into search terms:

Getting from the vague starting-out topic to on-target books, videos, and articles you can use – some example search terms:

- **Agriculture:** organic farming, sustainable agriculture, soil conservation, food security (this will pick up aspects of food production, nutrition, economics).
- **Climatology:** climate change, climate and impact (in library’s Quick search use “climate impact”; in databases use “climate *and* impact”).
- **Ecology:** biodiversity, ecology, ecosystem, human survival, survivability (better for databases; in library materials the survivability focus is mostly military).
- **Economic systems:** sustainable development, economic impact, globalization (or “global” in general, combined with other search terms), global trade, free trade, local trade, local markets (or local market, or market*), transportation energy, manufacturing energy.
- **Policy** (beware of partisan political opinion writings): environmental policy, environmental protection, conservation.
- **Renewable energy:** renewal energy, (also search terms for specific forms of renewable energy – e.g. wind, solar, geothermal, or biofuels e.g. bagasse ethanol, algae, new experiments such as the “Bloom Box”).
- **Toxicology:** environmental disease (or “environment and disease” in databases or “environment* disease*” in library QuickSearch, emission, air pollution, soil contamination, ozone layer, atmospheric pollution.
- Tying topics together with multiple search terms, for example “farming and environmental impact”.

III. Searching techniques:

- The meaning of “ * “ : The asterisk * is a library QuickSearch wildcard for more powerful searching. For example to pick up anything related to environment-induced diseases, * searching picks up “environmental disease”, “the environment and diseases”, etc.
- **Databases:** use “and” to make search more specific; use “or” to broaden the search.

IV. Good to know when searching:

- For multiple perspectives, try the same search terms in several different databases.
- With especially on-target search results (citations, articles, or books), look at the wording and use some of them as additional search terms.

V. SciFinder Scholar:

- Winthrop users must set up individual logins.

Environmental Science topics, and best databases for finding them:

- [1] **Science Topics:** Agriculture, Ecology (Biology), Chemistry, Hydrology, Toxicology, Food safety, Public Health. **Databases:** *Agricola, Basic Biosis, Geobase, Medline, Nutrition Abstracts, Science Direct, SciFinder Scholar, Science Resource Center* (as starting point).
- [2] **Health Topics:** Medicine, Psychology (for example, the psychological implications of long-term evacuations due to disasters), Public Health. **Databases:** *CINAHL, TOXnet, Medline, PsychInfo*.
- [3] **Economics & Business Topics:** Economic, financial, and business consequences of environmental decisions: short-term and long-term, sustainable development. **Databases:** *Academic Search Premier, Business Source Premier, Business & Company Resource Center, Regional Business News*.
- [4] **Politics & Law Topics:** Public policy, Political issues, International law, International relations & diplomacy, Global cooperation / conflict. **Databases:** *Lexis Nexis, Academic Search Premier*.
- [5] **Architecture & infrastructure Topics:** impact of environmental actions, real estate development and “de-development” when already developed areas are returned to original wild state. **Databases:** *Academic Search Premier, Art index, Infotrac*.
- [5] **Mix of topics:** *Academic Search Premier, Lexis Nexis Academic, Academic OneFile, Opposing Viewpoints Resource Center, JSTOR* (archive of scholarly journal articles to the beginning, but no current articles).

Email / Save search results:

Dacus Library – QuickSearch engine and Library Catalog – from search-result list of books, videos etc:

Encore / Library QuickSearch results:

1. Click on “add to bookbag” on each title of interest.
2. Click on “my book bag” at top right of screen
3. Move cursor into e-mail box and fill in your full e- mail address, e.g. **must type @winthrop.edu**
4. Type a meaningful subject
5. Change export format to “full text”
6. Afterwards, clear search.

Library Catalog:

1. Click on “Save Record” on each title of interest.
2. Click on “View Saved” → Click “Export Saved”
3. Move cursor into e-mail box and fill in your full e- mail address, e.g. **must type @winthrop.edu**
4. Subject says “From library catalog”, change as needed
5. Change export format to “full text”
6. Afterwards, clear search.

Databases also have built-in features to choose / save / email:

- a. Save items to folder (some databases call this “mark record”), then
- b. go to saved/marked-records folder, then → follow through email dialog.
- c. Put in your *complete* email address, *including @winthrop.edu*

ENVIRONMENTAL SCIENCES - SOME LIBRARY RESOURCES

Start from www.winthrop.edu/dacus (library homepage)

1. To find books, videos, other items owned by the library, start with QuickSearch box.
2. To search databases for journal articles, choose “Databases” → choose from alphabetic or subject list.
3. **Off-campus access to databases:** to log in, username=last name, password= Winthrop ID number.

Databases supporting Environmental Studies & Sciences

- *ABYZ News Links* with links to online worldwide news sources organized by country
- *Academic Search Premier*
- *Academic OneFile*
- *Agricola*
- *Business Source Premier*
- *CINAHL*
- *Geobase*
- *ISI Web of Science with Biological Abstracts*
- *JSTOR*
- *Lexis Nexis*
- *Science Resource Center* (as a starting point)
- *Science Direct* • *SciFinder Scholar*
- *SKS Web Select*
- *SocIndex Full-Text*
- *TOXnet* (see “websites” for URL)

Websites

- TOXnet (from National Library of Medicine) (<http://toxnet.nlm.nih.gov/>) – has a nice portal with environmental health & toxicology resources
- U.S. Geologic Survey (<http://www.usgs.gov/>)
- Environmental Protection Agency (<http://www.epa.gov>)

A FEW LIBRARY MATERIALS

1. *The atlas of food : who eats what, where, and why.* Reference HD9000.5 .M52 2008
2. *Ecodesign : the sourcebook.* Reference TS171.4 .F73 2009
3. *Encyclopedia of environmental ethics and philosophy.* Reference GE42 .E533 2009
4. *Environmental issues in food production* (DVD). General Collection TD195.F57 .E58 2003
5. *The future of life [videorecording] : searching for solutions* (DVD). General Collection GE195.7 .F88 2004
6. *Global environment outlook 3 : past, present, and future perspectives.* REF.; GE170 G57 2002
7. *An inconvenient truth* (DVD). Reserves QC981.8.G56 .I533 2006
8. *An introduction to sustainable development.* Stacks HC79.E5 R63134 2008
9. *International encyclopedia of environmental politics.* REF.; GE170 .I55 2002
10. *McGraw-Hill dictionary of environmental science.* REF.; GE10 .M378 2003
11. *The Oxford companion to global change.* Reference GE149 .C84 2009

Tip: To find more, type environment* in the library QuickSearch box, then choose books and library location from the options on the left.