



# Environmental impact

## GUIDELINES

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### Obtaining Environmental Information On-Line

**ON-LINE SEARCHES OF COMPUTER NETWORKS** (such as the Internet) yield vast amounts of environmental information useful for agricultural project evaluation. This Guideline discusses how to find and organize that information. It assumes basic experience with personal computers, library searches, and Internet browsing; and access to a computer that has Internet access. It describes on-line resources and the challenges of using them effectively. It presents a strategy for searching databases for environmental information, and it concludes with recommendations on how to use the results of on-line searches.

#### Introduction

**ENVIRONMENTAL INFORMATION** is rapidly becoming available through “on-line” computer networks, such as the Internet. “On-line” refers to information that users obtain electronically, often at remote locations. Formerly, analysts had to physically visit or correspond with libraries and organizations that held environmental databases. Now they can contact “Web sites” to obtain references, texts, models, maps, and data via the “Internet.” The Internet is a network of computer networks that facilitates contact between information users and databases.

Libraries put their collections and databases on-line, and they offer advanced information management services to users. Technological changes are making environmental data available in enormous quantities and diverse formats. Searches which took weeks or months a decade ago can be done in hours or minutes with the new tools. Search results can be “bookmarked,” printed, or downloaded for ready access and use.

Well-structured Internet searches can provide rapid orientation to the environmental aspects of a mission. General environmental searches can be used for environ-

mental **classification** and **scoping**. Specific searches help identify the research available on issues that have been **screened** for greater attention.

Team members may be aware of these resources, but they may not know how to get the environmental information they need **efficiently** and **systematically**. Those who experiment with the Internet often find that they spend surprising amounts of time searching for the information required. “Unstructured wandering” is a pitfall to be avoided. Analysts with little time must get straight to the best sources of information; and once there, they must get the data they need as quickly as possible. This focused approach must be flexible enough to adapt to changes in Internet databases and addresses. It must be simple enough to accommodate the search protocols used in dif-

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ferent databases. Collaboration with professional librarians can help minimize these problems.

This Guideline assumes some experience with personal computers, basic library searches, and Internet browsing. To facilitate efficient searching, it does not encourage browsing with “search engines” until after “core” databases have been searched. The guideline does not cover all Internet resources (e.g., email, newsgroups, gopher, telnet, and ftp). Instead, it focuses on FAO on-line library services and the World Wide Web. It assumes that users are familiar with email; that they rarely have time to follow newsgroups; and that they will learn about telnet and ftp after they have identified, via the WWW, databases they need to contact and files they want to send or receive. The first step is to find the information.

## Approach

### BASIC PREPARATION

**THE INITIAL CONSIDERATIONS** are personal and practical. Do you search yourself or ask librarians and team members to do it? Do you have expert or limited search skills? Do you search widely or narrowly? Do you document your information loosely or meticulously? The answers to these questions help clarify aspects of the search you should undertake and those that should be done by others. Resource constraints are also important. Internet searches are inexpensive but not free. How much time do you have? How much time and computer resources do other team members have? What is your budget for data acquisition?

### TASK ANALYSIS

Before logging on the Internet, determine the types of environmental information the team needs at different stages of the mission and project cycle. General environmental information is needed first to describe the project area and determine the scope of the environmental assessment. Much of this information can be obtained from books, reports, and articles. These general needs

### Box 1

## STEPS FOR A WELL-STRUCTURED SEARCH

### Basic Preparation



### Task Analysis



### Collaboration



### Search Term Selection



### Phased Searching

- General Searching
- Specific Searching



### Using Search Results

are followed by screening of environmental issues and alternatives. In addition to previously published research, tasks may require data, maps, remote sensing imagery, or models.

### COLLABORATION

Working with reference librarians can help ensure the best use of emerging information technologies. Because environmental information crosses disciplinary boundaries, it is compiled under different headings in different libraries and databases. Reference librarians can help identify appropriate search terms and sources of information at the beginning of a search, diagnose flawed searches, and acquire and organize the information identified for later stages of assessment.

## SEARCH TERM SELECTION

When selecting search terms, consider alternative ways of classifying and cataloguing environmental aspects of the project. A crude search identifies thousands of references — or none at all. A well-structured search identifies the 10's to 100's of references most useful for environmental assessment. Use a technical thesaurus of agricultural and environmental terms, e.g., AGROVOC or INFOTERRA (FAO, 1997). Consider alternative spellings and publication languages. Begin with a small number of well-chosen search terms grouped under four broad headings: 1) agricultural sector terms; 2) general environmental terms; 3) geographic terms; and 4) specific environmental terms (see enclosed worksheet). Because search techniques vary, it is a good general rule to search for pairs of environmental terms first, and then to combine those results with sectoral and geographic terms, one at a time.

- **Agricultural sector terms** (e.g., “irrigation”). Specific agricultural terms should be reserved for use with specific environmental terms (e.g., “eutrophication”) as the screening of project alternatives proceeds.
- **General environmental terms** (e.g., “ecology” and “pollution”) are useful in combination with agricultural and geographic terms. The word “environment” can be qualified by terms like “assessment”, “factors”, “impacts”, “policies”, or “protection.”

### Box 2

#### CATEGORIES OF SEARCH TERMS TO USE

- **Agricultural Sector Terms**
- **General Environmental Terms**
- **Geographic Terms**
- **Specific Environmental Terms**

- **Geographic terms** narrow the search to work in or near the project area. Country names, regions, place names, and rivers are useful. For local area terms, it is useful to drop other agricultural and environmental terms. Caution: Simple combinations of topical and geographic terms may lead to a failed search (see “Case Study Box 3” on the following page).
- **Specific environmental terms** may include specific contaminants or species. For highly specialized environmental topics, it is useful to drop other geographic and sectoral search terms.

## PHASED SEARCHING

Once appropriate search terms have been identified, the next question is where and how to look for information.

It is easy to leap into Internet browsing and follow promising “links” as they appear on the screen — only to find that you have jumped from general issues of environ-

mental policy to specific ecological studies, without adequately covering any of them.

Five principles facilitate an orderly search. First, proceed from **general** to more **specific** environmental considerations. This principle helps identify major environmental sources early in the search and ensures a systematic general search. Second, search “**core**” databases first followed by more “**extended**” examination of related databases and “**additional links**” as resources permit. For agricultural projects, for example, FAO library databases should be regarded as core. The thoroughness of extended searching depends upon the environmental classification of the project, the adequacy of the core search, and

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**Box 3**

**“ENVIRONMENTAL” ASPECTS OF “IRRIGATION MANAGEMENT”**

**CASE STUDY**

**Y**ou are working on a subsectoral loan to improve irrigation management and have been asked about environmental factors to be considered. When you type “environmental” “irrigation” and “management” into AGRIS, you get nothing [0] because this combination of subject terms is not used to catalogue research publications. To understand what went wrong, consider the table of AGRIS results on the right.

It is a good general rule to start with individual terms and to add additional terms one at a time.

**TERM**

**NUMBER OF CITATIONS**

environment, irrigation, management	0
irrigation	15,681
management	87,981
environment*	82,904
irrigation management	761
environment* management	1,406
environment* and irrigation management	100

The last set of terms yields a rich body of evidence about the environmental aspects of irrigation management.

\* — THE ASTERISK IS A “TRUNCATION SYMBOL” WHICH ENSURES THAT WORDS WITH DIFFERENT ENDINGS (E.G., ENVIRONMENTS AND ENVIRONMENTAL ARE INCLUDED IN THE SEARCH).

the resources available. Third, organize the search under the following categories of databases:

- 1) **Agricultural databases;**
- 2) **Environmental databases;**
- 3) **Development databases;**
- 4) **General and regional libraries;**
- 5) **Search engines.**

Fourth, concentrate on the databases most productive for your project; scan those which seem awkward or slow while recognizing that they may be useful at a later stage. Finally, add the web pages listed in this Guideline to your Internet “bookmarks,” organizing them in folders to facilitate quicker access in future searches.

This method of general and specific searching; core and extended levels of analysis; and agricultural, environmental, and development databases is illustrated in Box 4.

## The General Search

### AGRICULTURAL LIBRARY DATABASES

For the purposes of these guidelines “Core” agricultural databases include those produced by FAO as well as commercial databases on the FAO Virtual Library that are available on-line to FAO staff and by subscription to others from the database providers. There are:

- **AGRIS (Agricultural Research Information System)** for scientific journal articles, conference proceedings, and grey literature (available on the “FAO Virtual Library”).
- **AGLINET (Agricultural Libraries Network)** to obtain the names and addresses of AGRIS/CARIS libraries in other countries.
- **CARIS (Current Agricultural Research Information System)** for current agricultural research projects and reports, searchable by project title, AGROVOC, country, and year.
- **FAO library**, the online FAO catalogue (expected 1997).

“Extended” searching includes other agricultural libraries, databases, and organizations. Some of these might be regarded as “core” depending upon the type of project evaluated. “Links” pages facilitate direct contact with other useful organizations.

- **NAL (U.S. National Agricultural Library [AGRICOLA])** for a comprehensive library of books, reports, and journal articles.
- **WAICENT (FAO World Agricultural Information Centre)** for agricultural statistics (FAOSTAT) and publications (FAOINFO).
- **CABI (Centre for Agricultural and Biosciences, International)** (available on FAO Virtual Library).
- **ASFA (Aquatic Sciences and Fisheries Abstracts)** (on FAO Virtual Library).
- **TROPAG (Royal Tropical Institute)** (on FAO Virtual Library).

- **CGIAR (Consultative Group for International Agricultural Research)** for international programs and projects.
  - **CIRAD (Centre de cooperation internationale en recherche agronomique pour le developpement)**, particularly for agricultural literature in French.
- “Additional links” are available at the **FAO Library Reference’s Bookmarks**; **U.S. National Agricultural Library’s WWW Internet Sites**; and **WWW Virtual Library Agriculture**.

**ENVIRONMENTAL DATABASES**

“Core” environmental databases at the U.N. Environment Programme (UNEP) can help identify environmental contacts and reports. For protected area information, species information, and scientific literature, consult the World Conservation Monitoring Centre and the subscription databases noted below.

*A good general rule is to search “core” databases first followed by “extended” searching and additional links.*

- **UNEP INFOTERRA National Focal Points (NFP)** — for the main UNEP environmental contact in each country, and referral to other contacts.
- **UNEP Gopher** for library and other databases.
- **UNEP GRID (Global Resource Information Database)** for international data centers that compile and disseminate tabular and geo-referenced environmental data.
- **UNEP State of the Environment Report** for regional environmental concerns and policy responses.
- **WCMC (World Conservation Monitoring Centre)** for protected areas, biodiversity, species, and habitat information.
- **Dialog** subscription databases to search the environmental science literatures, e.g. **BIOSIS, Enviroline,**



**Environmental Bibliography** and **GEOBASE** (consult FAO librarian).

“**Extended**” searching might draw upon international environmental organizations including:

- **CIESIN (World Data Center-A for Human Interactions in the Environment)** for demography, treaties, and global environmental change databases.
- **CEDAR (Central European Environmental Data Request Facility)** for central/eastern European information.
- **START (System for Analysis, Research, and Training)** for regional research on global environmental change.

**Additional Links** are available at the **FAO Library Bookmarks** and the **WWW Virtual Library Environment**.

#### **DEVELOPMENT DATABASES**

“**Core**” databases on economic and institutional aspects of environmental assessment include those of the U.N. Development Programme (UNDP) and World Bank.

- **UNDP Home Page** for sustainable development news, programs, and information.
- **UNDP Sustainable Development Networking Programme** for environment-development networks in selected developing countries.
- **World Bank Search of Documents in the Public Information Centre (PIC)** for Environmental Assessments, National Environmental Action Plans, reports of the Operations Evaluation Department, Trust Funds for the Environment Documents, and others. Searchable by field (country, sector, and keyword) and full-text.
- **Institute of Development Studies** (Sussex, UK) which supports **Devline**, an information service, with on-line access to the **British Library of Development Studies** and **ELDIS**, an electronic clearinghouse for environment and development information.

“**Extended**” searching should focus on bi-lateral development organizations with substantial data collections and “**additional links**”, including:

- **International Development Research Centre (IDRC)** of Canada for their Development Data Bases Service (DDBS) which includes the IDRC library.
- **U.S. Agency For International Development (USAID)** for its **Environment & Natural Resources Information Center** and **Development Links**.

#### **GENERAL AND REGIONAL LIBRARIES**

Library catalogues contain a wealth of environmental information which may be effectively searched after keywords are refined, and gaps in the environment and

*Library catalogues contain a wealth of environmental information which may be effectively searched after keywords are refined.*

development literatures emerge. They include the U.S. Library of Congress (LOC) for books, and UNCOVER for journal articles. Area studies libraries, e.g., the Committee on South Asian Libraries and Documentation (CONSALD), are also on-line.

#### **SEARCH ENGINES**

Search engines should be used as the General Search is being completed to identify other web pages that might be relevant for general and specific environmental assessment. Popular search engines include: **Alta Vista**, **Excite**, **Infoseek**, **Lycos** and **Yahoo**.

### **Specific Searches**

The screening phase of environmental assessment requires more specific analysis of technologies (e.g., canal



irrigation vs. tubewell irrigation); pollutant and contaminant pathways; and vulnerability of plant and animal species and communities. On-line searching for these topics has two main steps.

First, repeat the strategy outlined above for the general environmental search using more specific search terms. Draw more heavily upon experts to identify keywords and to determine which information should be acquired.

Second, use the same approach with specialized on-line databases. Public databases, e.g., **Selected Water Resources Abstracts**, may be searched by any member of the team who has access to the World Wide Web. Private subscription databases should also be considered. The FAO library has access to the following environmental databases through Dialog:

- **BIOSIS** and **Enviroline** (biological and ecological references)
- **CHEMTOX**, **Pollution Abstracts**, and **TOXLINE** for contaminant fate, transport, and effects analysis.
- **GEOBASE** and **Georef** (geographic and geological references).
- **MEDLINE** for environmental health and medicine.

These are just a few of the valuable sources of specialized environmental information available in reference libraries and by subscription. Although listed here under “extended” searches, they may be an efficient source of “core” information when the issues are well defined.

## Using Search Results

On-line searches yield large amounts of information which, if not well organized, are difficult to use. Several practices facilitate use of on-line search results:

- **On-Line Search Form notes** — The enclosed on-line search form has an “Action” column for note-taking during searches. These notes are useful when consulted weeks or months after the search.

- **Printing** — It is useful to print internet pages and keep them in an active project file or copy them to others.
- **Downloading** — Search results may be copied to a diskette or hard drive with many databases. It is important to keep those downloaded results on diskettes that are accessible and well-organized for later use.
- **Forwarding Results** — It is easy to forward downloaded search results to other team members by email or ftp.
- **Follow-up** — Analysing search results and further searching should be delegated among team members, and the results may be exchanged through project meetings or email.
- **Documentation** of search results maintains an electronic trail that can be updated as Internet tools evolve.

*Search engines should be used as the General Search is being completed to identify other web pages that might be relevant for general and specific environmental assessment.*

### REFERENCES AND NOTES:

FAO. 1997. AGROVOC: Multilingual Agricultural Thesaurus. 3rd Edition. Rome: FAO, 1997.

FAO Reference Library. Phone: (39)(6) 55253784; email: FAO-library-reference@fao.org

NOTE: LISTING OF ORGANIZATIONS AND PRODUCTS DOES NOT IMPLY ANY ENDORSEMENT OF THEM BY FAO.

## Internet Addresses for Databases Cited Above

(D=Searchable Database; O=Useful Organizations)

### AGRICULTURE — CORE SEARCH

- FAO(O) — <http://www.fao.org/library/>  
AGRIS(D) — on FAO Virtual Library or subscription  
CARIS(D) — [http://www.fao.org/library/caris/  
caris-e.htm](http://www.fao.org/library/caris/caris-e.htm)  
AGLINET(D)—[http://www.fao.org/library/dlubin/  
aglincen/aglinlist.htm](http://www.fao.org/library/dlubin/aglincen/aglinlist.htm)

### AGRICULTURE — EXTENDED SEARCH, ADDITIONAL LINKS & ORGANIZATIONS

- NAL(D) — <http://www.nalusda.gov/isis/>  
Or telnet:opac.nal.usda.gov; and login as ISIS.  
WAICENT(D) — [http://www.fao.org/waicent/  
waicente.htm](http://www.fao.org/waicent/waicente.htm)  
TROPAG(D) — on FAO Virtual Library or subscription  
ASFA(D) — on FAO Virtual Library or subscription  
CABI(D) — on FAO Virtual Library or subscription  
CGIAR(O) — <http://www.cgiar.org/>  
CIRAD(O) — <http://www.cirad.fr/>  
FAO(O) — <http://www.fao.org/library/bookmk2.htm/>  
NAL(O) [http://www.nal.usda.gov/other\\_internet\\_sites/](http://www.nal.usda.gov/other_internet_sites/)  
NCSUW(O) — [http://ipm\\_www.ncsu.edu/cernag/  
cern.html/](http://ipm_www.ncsu.edu/cernag/cern.html/)

### ENVIRONMENT — CORE SEARCH

- UNEP INFOTERRA NFP(D) —  
<http://unep.unep.no/unep/eia/ein/infoterr/nfplist.htm>  
UNEP Databases on Gopher(D) —  
<http://unep.unep.no/newdraft/unep/gophdata.htm>  
UNEP GRID(D) — [http://unep.unep.no/unep/eia/  
ein/grid/](http://unep.unep.no/unep/eia/ein/grid/)  
UNEP GEO-1, 1997 — <http://www.grid.unep.ch/geo1/>  
WCMC(D) — <http://www.wcmc.org.uk/cis/>  
Enviroline, GEOBASE, and BIOSIS(D)—FAO  
Reference or subscription

### ENVIRONMENT — EXTENDED SEARCH, ADDITIONAL LINKS & ORGANIZATIONS

- CIESIN(D,O) — <http://www.ciesin.org/>  
CEDAR(D,O) — <http://www.cedar.univie.ac.at/data/>  
START(O) — <http://www.start.org/index/>  
FAO(O) — <http://www.fao.org/library/bookmk2.htm/>  
WWW-ENV(O) — [http://ecosys.drdr.virginia.edu/  
Environment.html](http://ecosys.drdr.virginia.edu/Environment.html)

### DEVELOPMENT — CORE SEARCH

- UNDP(O) — <http://www.undp.org>  
UNDP-SDNP(D) — [http://www3.undp.org/countries/  
country.html](http://www3.undp.org/countries/country.html)  
World Bank-PIC(D) —  
[http://www.worldbank.org/html/pic/  
PICGLOBALSearch.html](http://www.worldbank.org/html/pic/PICGLOBALSearch.html)  
Devline(D) — <http://www.ids.ac.uk/>  
BLDS(D) — <http://www.ids.ac.uk/dbases/idisdb.html>

### DEVELOPMENT — EXTENDED SEARCH, ADDITIONAL LINKS & ORGANIZATIONS

- IDRC(O) — <http://www.idrc.ca/library/>  
ENRIC(DO) — <http://www.infor.gov/environment/enric/>  
and <http://www.info.usaid.gov/resources/index.html>

### GENERAL AND REGIONAL LIBRARIES

- LOC (D)— <http://lcweb.loc.gov/z3950>  
UNCOVER(D) — <http://uncweb.carl.org>  
CONSALD(DO) — [http://www.lib.virginia.edu/  
area-studies/SouthAsia/Lib/sapages.html](http://www.lib.virginia.edu/area-studies/SouthAsia/Lib/sapages.html)

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<http://www.fao.org/WAICENT/FAOINFO/TCD/tci/tci.htm>



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# Water Resources, Irrigation and Drainage Information On-Line

**THIS SHEET SUPPLEMENTS** the FAO Environmental Impact Guideline on **Obtaining Environmental Information On-Line** (1997). In that Guideline, FAO library databases are consulted first, followed by international environmental and development organizations. Here we turn to the more specific types of water information needed in environmental assessment, the Internet sites to obtain them, and a list of water search terms. Because the range of water issues in environmental assessment is enormous, it is useful to review the terms on the back of this sheet (FAO, 1997). Search terms for irrigation and drainage projects are more limited, and FAO publications provide further guidance on environmental assessment of such projects (FAO, 1995, 1996).

## Internet Web Sites

After searching general agricultural, environmental, and development databases for water information, the analyst should examine specialized water resources databases at “core” or “extended” levels of analysis.

### CORE SEARCHING

The most comprehensive on-line water library is Selected Water Resources Abstracts, available at the U.S. Geological Survey Internet Web site. Only a few U.N. water programs had substantial on-line water information in 1996. FAO **AQUASTAT** provides national level data on agricultural water use in Africa, and UNEP describes its Water Programs on-line. Multilateral initiatives, such as the Global Water Partnership and World Water Council, may provide information services in the future.

Specialized water sector organizations provide information on irrigation, water conservation, water quality, and sanitation.

- **Irrigation** — International Irrigation Management Institute (IIMI); International Commission on Irrigation and Drainage (ICID); and the International Program for Technology Research in Irrigation and Drainage (IPTRID).
- **Water Conservation** — WaterWiser, the Water Efficiency Clearinghouse.
- **Water Quality** — International Association for Water Quality (IAWQ).
- **Sanitation** — Global Applied Research Network in Water Supply and Sanitation (GARNET).

### EXTENDED SEARCHING AND ADDITIONAL LINKS

For extended searching, focus on international research and consulting organizations. These organizations should be treated as “core” if they are involved in the project area.

- Cemagraf
- Commonwealth Scientific and Industrial Research Organization
- Delft Hydraulics
- International Land Reclamation Institute (ILRI)
- HR Wallingford (HRW)
- U.S. Bureau of Reclamation (USBR)
- U.S. Salinity Laboratory (USSL)
- U.S. Environmental Protection Agency (USEPA)

University water institutes provide on-line services. The Universities Water Information Network (UWIN) maintains a database of university water programs in the U.S. Other centers include Loughborough University’s Water, Engineering and Development Centre (WEDC); the School of Oriental and African Studies (SOAS) Water Issues Group; the University of California Water Resources Center Archives (UCWRCA); and the University of Wisconsin Water Resources Center Library (UW). Irrigation web sites include Utah State University’s International Irrigation Center; and the University of Southampton’s Institute of Irrigation Studies. Some regional organizations are developing web sites, such as the Danube Information System (DANIS) and the Middle East Water Information Network (MEWIN). There are many lists of “additional links,” of which the most comprehensive in 1997 were UWIN, the Hydrology Web, and the WWW Virtual Libraries for Irrigation and Environment-Hydrosphere.

## AGROVOC Water Sector Search Terms

### WATER/EAU/AGUA

water  
drinking water  
freshwater  
groundwater  
rainwater  
saline water  
brackish water  
sea water  
soil water  
surface water  
water availability  
water balance  
water conservation  
watershed management  
water currents  
water depletion  
water deprivation  
water desalting  
water erosion  
water exploration  
water hardness  
water harvesting  
water holding capacity  
water levels  
water management  
water pollution  
eutrophication  
pollutant load  
bioremediation  
leachates  
non-point source  
wastewater  
water purification  
water purification  
water quality  
water requirements  
water reservoirs  
water resources  
water rights  
water springs  
water storage  
water supply  
water temperature  
water tolerance  
water uptake  
water use  
water yield  
watershed management  
watersheds  
wetlands

### DRAINAGE

canals  
drainage  
drainage equipment  
drainage systems  
drainage water  
reclamation  
sewerage  
soil management  
wetlands

### IRRIGATION

irrigated farming  
irrigated land  
irrigated rice  
irrigated soils  
irrigation  
irrigation methods  
automatic irrigation  
basin irrigation  
border irrigation  
flood irrigation  
furrow irrigation  
trickle irrigation  
runoff irrigation  
sprinkler irrigation  
subsurface irrigation  
surface irrigation  
irrigation rates  
irrigation scheduling  
irrigation schemes  
irrigation systems  
irrigation water  
wastewater irrigation

### SEE ALSO:

aquatic weeds  
canals  
dams  
dam operations  
disease ecology  
drought  
erosion  
flood\*  
hydrolog\*  
hydropower  
reservoir\*  
salini\*  
sanitation  
sedimentation

\* = truncations symbol

## Water Resources, Irrigation and Drainage Internet Addresses

(D=Searchable Database; O=Useful Organizations)

### CORE SEARCHES

SWRA(D) <http://h2o.er.usgs.gov/public/nawdex/swra.html>  
AQUASTAT(D) <http://www.fao.org/waicent/faoinfo/agricult/aquastat/aquatoc.htm>  
UNEP(O) <http://unep.unep.no/unep/program/natres/water/>  
IIMI(O) <http://www.worldbank.org/html/cgiar/directory/IIMI.html>  
ICID(O) <http://www.hrwallingford.co.uk/ICID/icid.htm>  
IPTRID(O) <http://www.hrwallingford.co.uk/iptrid.htm>  
WATERWISER(D) <http://www.waterwiser.org/>  
IAWQ(O) <http://www.iawq.org.uk>  
GARNET(D,O) <http://info.lut.ac.uk/departments/cv/wedc/garnet/grntover.html>

### EXTENDED SEARCHES & WATER ORGANIZATIONS

Cemagref(O) <http://www.montpellier.cemagref.fr>  
CSIRO(O) <http://www.dwr.csiro.au/>  
Delft(O) <http://www.wldelft.nl/>  
ILRI(O) <http://www.ilri.nl/>  
HRW(O) <http://www.hrwallingford.co.uk/int2-1.htm>  
USBR(O) <http://www.usbr.gov/>  
USGS(O) <http://h2o.er.usgs.gov/>  
USSL(O) <http://www.ussl.ars.usda.gov/index000.htm>  
USEPA(O) <http://www.epa.gov/OW/search.html>  
DANIS(O) <http://www.cedar.univie.ac.at/data/danis/>  
MEWIN(O) <http://www.ssc.upenn.edu/~mewin>

### EXTENDED SEARCHES • UNIVERSITIES

UWIN search(D) <http://www.uwin.siu.edu>  
WEDC(O) <http://info.lut.ac.uk/departments/cv/wedc/index.html>  
SOAS(O) <http://endjinn.soas.ac.uk/Geography/WaterIssues/>  
UCWRCA(D,O) <http://www.lib.berkeley.edu/WRCA/>  
UW(D,O) [http://www.library.wisc.edu/libraries/Water\\_Resources/wrrs.htm](http://www.library.wisc.edu/libraries/Water_Resources/wrrs.htm)  
IIC(O) <http://www.engineering.usu.edu/Departments/iic/iichome0.html>  
IIS(O) <http://www.soton.ac.uk/~iis/index.html>

### ADDITIONAL LINKS

UWIN links <http://www.uwin.siu.edu:80/WaterSites/browse.html>  
Hydro Web <http://etd.pnl.gov:2080/hydroweb.html>  
WWW Virtual Library Environment-Hydrosphere  
<http://ecosys.drdr.Virginia.edu:80/hyd.html>  
WWW Virtual Library IRRIGATION  
<http://www.wiz.uni-kassel.de/kww/projekte/irrig/>

### REFERENCES

FAO. 1995. Environmental impact assessment of irrigation and drainage projects, FAO irrigation and drainage paper 53 (Rome, FAO).

FAO Investment Centre. 1996. Guidelines for planning irrigation and drainage investment projects (Rome, FAO), which uses the International Commission on Irrigation and Drainage's checklist for environmental impact assessment.

FAO. 1997. AGROVOC: Multilingual Agricultural Thesaurus, 3rd ed. Rome: FAO.

**NOTE:** Listing of organizations and products does not imply any endorsement of them by FAO.



# FAO Investment Centre On-Line Search Form

### PROJECT INFORMATION

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ email: \_\_\_\_\_

Project name: \_\_\_\_\_ date: \_\_\_\_\_

### PRIMARY SEARCH OBJECTIVE (orientation; general; specific)

Search schedule/deadlines: \_\_\_\_\_

Library contacts: \_\_\_\_\_

UNEP National Focal Point (NFP): \_\_\_\_\_

AGRIS Library: \_\_\_\_\_

Team member contact notes: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

DATABASE SEARCHED	SEARCH LEVEL	RESULTS	ACTION

**L E G E N D :**

**DATABASE**  
Name  
Address

**LEVEL**  
Systematic  
Moderate  
Preliminary

**RESULTS**  
Too Many  
Too Few  
Excellent  
Complete  
Incomplete

**ACTION**  
Printed  
Downloaded  
Sent to  
Follow up by:

**SUBJECT AND KEY WORDS USED :**

<p><b>GENERAL ENVIRONMENTAL TERMS:</b></p> <p>alternative agriculture          biodiversity          desertification          ecology or ecolog*+          environment*+          environmental degradation          environmental factors          environmental impact          environmental impact assessment          environmental management          environmental policies          environmental protection          nature conservation          pollution          resource conservation          resource depletion          sustainability          waste management          other:</p>	<p><b>SECTOR/TECHNOLOGY TERMS:</b></p>
<p><b>SPECIFIC ENVIRONMENTAL TERMS</b> (based on screening process):</p>	<p><b>GEOGRAPHIC TERMS</b> (country, province, river, region, locality):</p>

**NOTE:** For best results, start with general environmental and sector terms, e.g., “environmental management” and “irrigation”; then add geographic terms.

\* = truncation symbol; + = consult AGROVOC subheadings.

**SOURCE:** FAO. 1997. AGROVOC: Multilingual Agricultural Thesaurus, 3rd ed. Rome: FAO.