

## UWIN NEWS

### THE CHANGING VIRTUAL WORLD OF WATER POLICY

**Faye Anderson**

Director UWIN

Southern Illinois University

*This article is available on-line with all hyperlinks @  
<http://www.uwin.siu.edu/topics/WaterPolicy/index.html>*

Internet technologies are transforming the ways we do water research and education in academia and the ways that the various stakeholders conduct public policy processes as well. Email, listservers, Web Sites, and on-line conferencing offer expanded opportunities for information dissemination, the exchange of ideas, public participation, access to information, etc. Some examples that concretely illustrate how these opportunities are transforming both our professional lives and policy outcomes include:

- The public comment period recently ended for the Northeast Planning Area of the National Petroleum Reserve (NPR) in Alaska. The entire Draft Environmental Impact Statement (EIS) can be found on the Bureau of Reclamation Northwest Office's Web Site at <http://aurora.ak.blm.gov/npra>. This Web Site served to coordinate the public's on-line participation in BLM's EIS process. The notice published in the Federal Register, the EIS Team, public meeting announcements, press releases, public comment forms and transcripts of the hearing and testimony, etc. were all available on this site. This site allowed virtually instantaneous access to the Draft EIS and the comments submitted on-line will be incorporated into the Final EIS. Anyone with interests in water resources, water quality, fish, marine mammals and coastal zone management in this area of Alaska could read the description and analysis provided by the EIS Team and immediately submit their comments for consideration. Email links to the BLM Team contact were also available for further questions and comments. This method of incorporating public comment was incorporated into the strategies of special interest groups mobilized around this NPR issue. For instance, The Wilderness Society has a special page on their Web Site at <http://www.wilderness.org/wildalaska/oil.htm> devoted to the NPR issue and the Draft EIS. The Wilderness Society lists its evaluation and concerns with the Draft EIS and provides links to the Draft EIS and its public comment pages, thus encouraging
- its own particular constituency to participate in the BLM EIS process. This example points to the growing interest of all stakeholders in on-line information access and public participation.
- The United States Geological Survey (USGS) exemplifies the tremendous effort that federal agencies are putting into on-line information marketing; in fact the USGS received a *Webmaster* magazine award for its efforts in 1997 (personal conversation, K. Lanfear, USGS). The USGS site at <http://www.usgs.gov> is used by everyone from kayakers and fishermen to emergency professionals in times of natural disasters. The Water Division's Web Site provides access to volumes of water data, some in near real and real time. For instance, the Glen Canyon Dam Release in 1997 could be monitored in real time from their pages. This access to on-line information translates into real dollars and sometimes lives as well. During the 1996 flooding in the Willamette Valley of Oregon, access to real time data helped local officials forecast and implement an early warning effort that helped save many lives and an estimated \$2.7 billion worth of flood damage.
- In the May 15, 1997 issue of *Nature* magazine, an article titled "The Value of the World's Ecosystem Services and Natural Capital" was published that attempts to place a dollar figure on the annual value of global ecological life support systems. This article by Costanza et al (twelve authors) has been alternately described as exciting, controversial, and ambitious and received much attention in the academic and popular presses. *Nature* (<http://www.nature.com>) made the article available on-line to stimulate interest in both the magazine and the article's ideas. The International Society for Ecological Economics (ISEE at <http://csf.Colorado.EDU/isee>), in cooperation with the authors, also placed the article on its Web Site and set up a forum where readers could discuss the

article with the authors and each other. Selected on-line comments from readers, with responses from the authors, were published in ISEE's *Journal of Ecological Economics*. This example illustrates the growing integration of the on-line world and traditionally published materials.

- Faculty are beginning to develop sophisticated Web Sites to support their teaching and research activities beyond the obligatory vita., some professors are incorporating a listserver as well to generate questions and discussions beyond the classroom walls. David Maidment, Professor of Civil Engineering at the University of Texas at Austin, has a Web Site that illustrates how a Web Site can effectively support your research, publications, and teaching activities at <http://www.ce.utexas.edu/prof/maidment/webfiles/home.html>. In particular, every course he teaches is developed on his home page: Hydrology, Environmental Risk Assessment, GIS in Water Resources, etc.
- Research grants remain critically important to water resources researchers. Research competition announcements are being consolidated on-line by the federal agencies on their respective Web Sites:  
NSF: <http://www.nsf.gov/home/grants.htm>  
EPA: <http://es.epa.gov/ncercqa/grants>  
USDA: <http://www.reeusda.gov/funding.htm>  
USGS: <http://www.usgs.gov/contracts/>  
Additionally, the federal agencies are instituting on-line proposal submission systems and encouraging researchers to use this technology, in fact some are already mandatory and it is expected that in the near future, all submissions will be electronic. For example, the National Science Foundation's electronic submission system is named FastLane. The USGS External Research Program accepts on-line registration of proposals at <http://erp-web.er.usgs.gov/register.htm>. The electronic submission of proposals, and eventually completed project reports, will aid in a more timely dissemination of research results on-line to interested parties.
- Recently, Canada underwent reconsideration of its federal water policy. The proposed federal legislation was put on-line and made available for particular key stakeholders throughout each of the provinces to evaluate and comment upon. Comments and discussion were coordinated on-line by Environment Canada (<http://www.ec.gc.ca>) and were made available for the various stakeholders to read (this information was not made publicly

available over the WWW). These solicited ideas were then incorporated into the proposed legislation early on in the political process. (Personal conversation, L. Lefrancois, Environment Canada). This early participation of key governmental and non-governmental stakeholders both influenced the content of the legislation and allowed greater buy-in of participants in both the process and its eventual outcomes. The World Wide Web was instrumental in facilitating this broad participation, and had the features of being both timely and cost-effective.

- On-line information networks are developing that actively support the planning and management of our natural resources in particular geographic locations. The Great Lakes Information Network (GLIN at <http://www.great-lakes.net>) is an excellent example of such a network. GLIN provides a gateway of locally developed information to the economy, ecosystem and environment, education, and tourism surrounding the Great Lakes Area. GLIN encompasses a systematic approach that includes listservers, multiple Web Sites, local meetings, annual conferences, etc. The goals of GLIN are to provide one place on-line for users wanting to find information relating to the Great Lakes and to provide stakeholders with information to better their decision-making.
- *The Globe and Mail* (<http://www.theglobeandmail.com>) reported how a global network of grassroots organizations derailed the Multilateral Agreement on Investment (MAI) using the Internet. It was agreed at a meeting of the OECD ministers this past April that the Internet campaign by the NGOs was successful in halting the negotiations aimed at developing international rules for foreign investment, similar to those for trade in goods. The OECD now admits it needs strategy for information and communication in light of cyber-globalization. This example points to the potential for international concern over water resources being mobilized over the Internet as well.
- The Inter-American Water Resources Network (IWRN at <http://iwrn.ces.fau.edu>) is developing a database on water laws throughout the Hemisphere. It is hoped that such a database will be useful to researchers, government officials, and private citizens alike. As much of the hemisphere is in the process of developing such laws, the on-line availability of existing laws may help the development of new water law as well.

These examples are offered to illustrate the usefulness of

Internet technologies. While it is still the case that access to such technologies is unevenly distributed, they are becoming more widespread over time and their influence is having a profound impact on our activities already. It is clear we cannot ignore this growing impact and must consider how we can better incorporate information technologies into our activities.

To aid in furthering this goal within the water resources community, UWIN is joining with the OAS ([www.oas.org](http://www.oas.org)), IWRN, Florida Center for Environmental Studies ([www.ces.fau.edu](http://www.ces.fau.edu)), and CATHALAC ([www2.usma.ac.pa/~cathalac](http://www2.usma.ac.pa/~cathalac)) to conduct a *Water On the Web Summit Workshop* next October in Ft. Lauderdale, Florida. The objectives of this *Summit* are to assess the state of on-line water information as it currently exists and to make recommendations for future directions for the development of water resources information on-line. Reports on the outcomes from this *Summit* will be summarized in future *Updates*. Additionally, in conjunction with the timely theme of UCOWR's Annual Meeting "**Cross Currents in Water Policy**", UWIN is establishing a *WaterPolicy listserver* to promote broader discussion of the issues discussed in these last two

*Updates* dealing with water policy. We hope this listserver will promote deeper discussion throughout the water resources community of policy issues. To sign on to this listserver, send the following email message to [UCOWRlists@uwin.siu.edu](mailto:UCOWRlists@uwin.siu.edu):

subscribe WaterPolicy

We hope you participate in UCOWR's on-going discussion of water policy issues.

**Faye Anderson** is the Director of the Universities Water Information Network (UWIN at <http://www.uwin.siu.edu>). UWIN is a joint project of the Universities Council on Water Resources and the United States Geological Survey.

*We are collecting further examples of how the Internet is transforming our activities in the water resources community and how it is affecting water outcomes. Please submit these to [faye@uwin.siu.edu](mailto:faye@uwin.siu.edu). These will be included in future issues of Update.*