

# RESEARCH AND COMMUNICATIONS RESOURCE – THE BLACK SEA AND CASPIAN SEA ENVIRONMENTAL INFORMATION CENTER ([HTTP://PIMS.ED.ORNL.GOV](http://pims.ed.ornl.gov))

Marian K. (Kay) Thompson  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Room 7G-050  
Washington, D.C. 20585

Melissa V. Lapsa, Robert B. Shelton, Kim R. Grubb  
Oak Ridge National Laboratory  
P.O. Box 2008  
Oak Ridge, TN 37831-6067

## ABSTRACT

Prevention of oil spills and effective action in the case of a spill are crucial to protecting and maintaining the environment. Up-to-date, reliable, and easily accessible research and information are extremely important and help to ensure a united front of preparation and to facilitate remedial action should a spill occur. The better the information available, the better the chance for prevention and, in the event of a spill, efficient and effective cleanup.

The Interspill 2004 conference in Trondheim, Norway, hosted a U.S.–Russian Workshop on Oil Spill Prevention and Response. The workshop, which focused on dispersants, was the culmination of agreements signed by U.S. Secretary of Energy Spencer Abraham and Russian Minister of Energy Igor Yusufov to discuss energy issues of interest to both countries and to implement the oil spill prevention and response agreement developed between the United States and Russia. To assist the participants and in concert with the workshop, the Black Sea and Caspian Sea Environmental Information Center (<http://pims.ed.ornl.gov>) posted relevant material from the U.S. Environmental Protection Agency (EPA), the International Petroleum Industry Environmental Conservation Association (IPIECA), the International Tanker Owners Pollution Federation (ITOPF), the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Coast Guard. Although this web site offers information on region- and country-specific initiatives, its usefulness is far-reaching—the Center's information on oil spill prevention and response, research and development, and communications and related technologies have worldwide applications. Indeed, more than a hundred organizations from all over the world have registered, and interested organizations are encouraged to do the same to promote their technologies, services, or research activities. The site is being accessed at roughly 1,000 hits per day from 115 countries all over world. During July 2004, there were more than 40,000 hits on the web site. The oil industry strongly supports the information center and has representatives participate in all of its workshops. The Center is intended to be used as a tool to provide a comprehensive source of information:

- It publishes results and lists participants of several workshops.

- It hosts online “real-time” meetings that allow participants to plan structured meetings at an optimal time across different time zones.
- It provides information on oil spill prevention, cleanup, monitoring, and related commercial technologies and offers on-line discussions of these issues.
- It provides information about the laws, regulations, and standards of various countries relating to the environmental condition of the sea.
- It posts relevant published scientific papers.
- It publishes lists of participants working on Black Sea and Caspian Sea environmental issues.
- It is home to a growing database of historical pollution-testing data from research institutes in the region.

## DISCUSSION

Prevention of oil spills and effective action in the case of a spill are crucial to protecting and maintaining the environment. Up-to-date, reliable, and easily accessible research and information are extremely important and help to ensure a united front of preparation and to facilitate remedial action should a spill occur. The better the information available, the better the chance for prevention and, in the event of a spill, efficient and effective cleanup.

Created by Oak Ridge National Laboratory (ORNL), the Black Sea and Caspian Sea Environmental Information Center (<http://pims.ed.ornl.gov>) (Fig. 1) is dedicated to providing information and training on environmental issues and problems related to the Black and Caspian Seas (Thompson, Lapsa, and Shelton 2003). The site facilitates information flow and dialogue between the countries of that region (Thompson and Lapsa 2001). DOE and ORNL have partnered with the U.S. Department of Defense's (DOD) Partnership for Peace Information Management System (PIMS) to provide the infrastructure necessary to support access to this web-based information in the region. This infrastructure includes satellite uplinks and the hardware necessary to support the Black Sea and Caspian Sea Environmental Information Center web site.

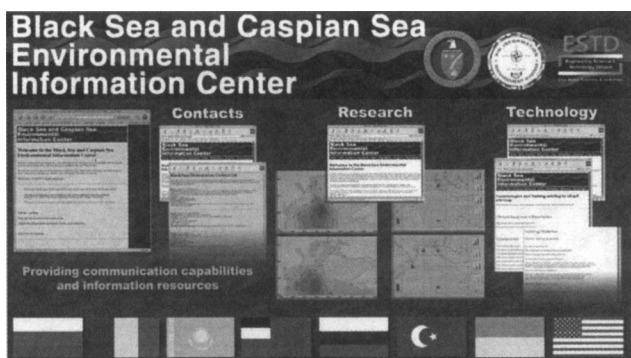


FIGURE 1: POSTER GRAPHIC HIGHLIGHTING THE WEB SITE

The Black Sea and Caspian Sea Environmental Initiative and participants in the regional environmental workshops determine the content and functionality of the web site. Visitors to the site can exchange ideas related to that environment and can register as a point of contact. The site provides a series of training links to help prepare for environmental emergency response situations. There are discussions on oil spill prevention, dispersants, and relevant national legal information. The site also features a chat room where “live” meetings can be scheduled and conducted on-line across time zones. The web site is intended to provide “one-stop shopping” for information related to oil spill prevention, response, research and development, and regional communications. It is a comprehensive source for:

- results and participants of several workshops;
- online “real-time” meetings that allow participants to plan structured meetings at an optimal time across different time zones;
- information on oil spill prevention, cleanup, monitoring, and related commercial technologies and on-line discussions of these issues;
- the laws, regulations, and standards of various countries relating to the environmental condition of the sea;
- published scientific papers; and
- lists of individuals and companies working on Black Sea and Caspian Sea environmental issues.

The site is also home to a growing database of historical pollution-testing data from research institutes in the region (Besiktepe, Unluata, and Bologa 1999). Recently, 31 years of pollution-testing data collected by the Ukrainian Scientific Center of the Ecology of the Sea (UkrSCES) was uploaded to the web site. The information includes compiled data, maps, graphic files, and background information on UkrSCES and contains a catalog of oceanographic data on the Black Sea (including chemistry and pollution), geophysical data, statistical evaluations of the data, meteorology, and aerology. Figure 2 shows an example of the kind of data provided by UkrSCES.

More than a hundred organizations worldwide have registered on the web site, and interested organizations are encouraged to do the same to promote their technologies, services, or research activities.

Current information on country-specific workshops, (e.g., presentations from the December 2003 U.S.–Russian Energy Workshop on *Oil Spill Prevention and Response* in Moscow— see [http://www.energy.gov/engine/content.do?PUBLIC\\_ID=14546&BT\\_CODE=PR\\_PRESSRELEASES&TT\\_CODE=PRESSRELEASE](http://www.energy.gov/engine/content.do?PUBLIC_ID=14546&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASE)) supplements the regional information posted on the web site. Follow-up workshops are announced as they come up and workshop materials are also available.

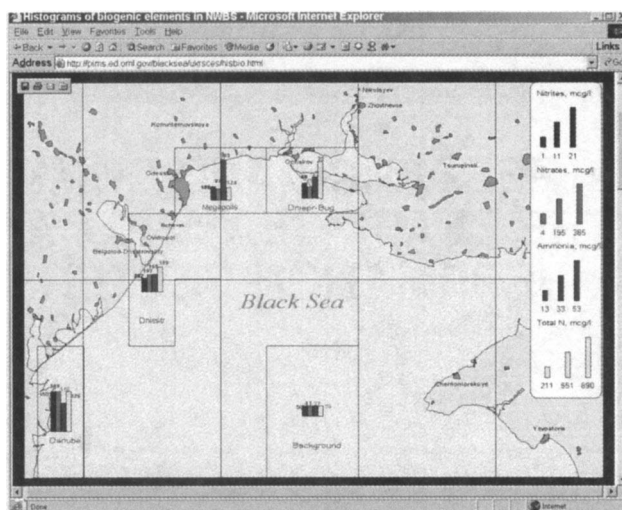


FIGURE 2: HISTOGRAMS OF BIOGENIC ELEMENTS IN THE BLACK SEA, COURTESY OF UKRSCES.

The oil industry, whose representatives participate in all of the Center’s workshops, strongly supports this activity. Other workshop sponsors have included:

- International Maritime Organization (IMO)
- International Oil Pollution Compensation Fund (IOPCF)
- International Petroleum Industry Environmental Conservation Association (IPIECA)
- International Tanker Owners Pollution Federation (ITOPF)
- National Oceanic and Atmospheric Administration (NOAA)
- ORNL Engineering Science & Technology Division
- Oil Spill Response Ltd. (OSRL)
- U.S. Agency for International Development (USAID)
- U.S. Army Corps of Engineers
- U.S. Department of Defense, Partnership for Peace Information Management Services (PIMS)
- U.S. Department of Energy (DOE), Office of Policy and International Affairs
- U.S. Navy

The Center’s goal as a regional information and communications center is to facilitate cooperation among the countries of the region to help prevent oil spills and to develop contingency plans should a spill occur. A series of workshops held in the Black Sea countries and in Central Asia is being offered.

Workshop participants are trained by staff from ORNL in the navigation of the DOE-sponsored web site to enhance knowledge and communication on oil spill contingency planning (<http://pims.ed.ornl.gov>). DOD has provided several computers for electronic communications between member countries’ research institutes. The Center, its workshops, and its web site have been a huge success highlighting the value of information and communication resources. A DOE press release with more background on this activity can be found at <http://www.energy.gov/HQPress/releases00/julpr/prl00010.htm>.

The Center is inviting other countries in the region to join in its activities, which include sharing data on the web site and coordinating responses to spills. A former Secretary of Energy committed DOE to a similar workshop for Africa as part of his Africa Initiative. Furthering the commitment, DOE scheduled an African Ministerial planning meeting in conjunction with the workshop (Cameroon, November 2000).

The workshops that ORNL has organized for DOE's Office of Policy and International Affairs and the interagency committee (Fig. 3), include:

- U.S.-Russia Dialogue on Oil Spill Prevention and Response, June 17-18, 2004, Trondheim, Norway
- Workshops on US-Kazakhstan Energy Partnership, June 8-10, 2004, Astana, Kazakhstan
- Funding Science Research with Central Asia and Caucasus Institutes, August 22-23, 2002, Oak Ridge National Laboratory, Oak Ridge, Tennessee
- US-Kazakhstan Workshop on Marine Science, May 30, 2001, Almaty, Kazakhstan
- Workshop on Legal and Legislative Issues with Implementing National and Regional Oil Spill Response Systems, April 18-19, 2001, Astana, Kazakhstan
- Workshop on Water Modeling for Oil Spill Response, January 22-26, 2001, Tbilisi, Republic of Georgia
- Workshop on Oil Spill Response Contingency Planning, November 1-3, 2000, Douala, Cameroon (Africa)
- Workshop on the Black Sea Environment and Oil Spill Response, July 25-27, 2000, Constanta, Romania
- Workshop on Legal and Legislative Issues Associated with Implementing National and Regional Oil Spill Response Systems, June 20-22, 2000, Tbilisi, Republic of Georgia
- Workshop on a Regional Oil Spill Emergency Response System for the Black Sea, September 14-17, 1999, Odessa, Ukraine

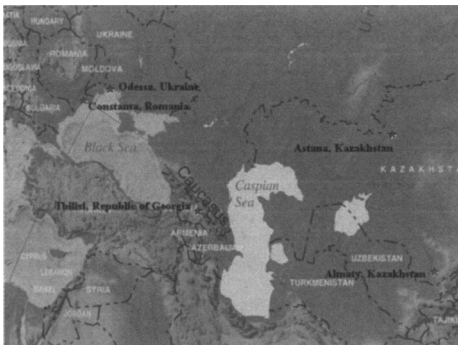


FIGURE 3: LOCATION OF WORKSHOPS IN BLACK SEA AND CASPIAN SEA REGIONS.

These workshops have been an important effort by DOE to bring together representatives from the region, oil companies, and other organizations to accelerate the dialog on environmental issues and to facilitate the creation of a regional capability to respond to oil spill threats on the Black and Caspian Seas. The workshops give countries of the region an opportunity to meet, discuss progress and current research initiatives presently under way. The progress made by these countries is very impressive. Almost all have completed a draft or published national oil spill emergency response contingency plans.

DOE plans future workshops in each of the countries to facilitate progress on national laws and regulations to protect the Black and Caspian Seas. These separate workshops for each country are in recognition that each country has a unique legislative system, group of existing laws, and laws in preparation. The workshops will focus on legal and legislative issues that are critical to effective oil spill response systems and identify legislative issues essential to regional cooperation on oil spill response. They will also cover international agreements.

If the Black Sea and Caspian Sea environmental initiative is to reach its full potential, participation, collaboration, and coop-

eration from several groups is essential (National Energy Policy Group 2001):

- policy makers and administrators in government agencies, including federal, state, and municipal government organizations;
- nongovernmental groups and community organizers;
- manufacturing, commercial, industrial, agricultural, transportation, and residential sectors;
- financial institutions;
- citizens likely to be affected by the policies adopted; and
- schools that educate tomorrow's decision-makers.

Therefore, the Black Sea and Caspian Sea Environmental Information Center web site offers benefits to many different groups and in the future, will customize information retrieval results by audience category.

## CONCLUSIONS

Statistics on the usage of the web site confirm positive results—it has consistently attracted users from around the world (more than a hundred countries), and users from the Black Sea and Caspian Sea region are finding it a useful tool for communications and information.

The web site has developed further to include information on all existing petroleum pipelines and proposed additions to the transportation network surrounding the Black and Caspian Seas.

This web site is an excellent aid for prevention and positive action related to oil spills. The site offers benefits for many kinds of people and organizations. The scientific community can use the Black Sea and Caspian Sea Environmental Information Center web site to share information, conduct on-line meetings, and strengthen their own networks for collaboration. For example, research institutes in Kazakhstan will soon contribute data and research papers. The website can always be improved and expanded, and we invite interested participants of the IOISC to discuss adding to the information database and scheduling on-line workshops and training sessions.

## BIOGRAPHY

**MARIAN KAY THOMPSON**—In June 1996, Ms. Thompson accepted appointment as Senior International Economist in the Department of Energy's newly created Office of Policy Analysis, Trade, and Investment for Europe, NIS, and the Middle East. This office provides policy advice and support on bilateral and multilateral energy issues to senior officials in the Department. Ms. Thompson is responsible for Central Asia and the Caucasus.

From February 1991 until June 1996, Ms. Thompson served as Deputy Director of the Office of Export Assistance at the Department of Energy. In this position, Ms. Thompson worked with energy firms to support their activities in international markets. The office of Export Assistance promoted U.S. energy technologies and worked to secure domestic and foreign economic and trade policies that encourage competitive access for U.S. exports.

Before joining the Energy Department, Ms. Thompson worked at the Department of Commerce in a number of positions in international trade. Ms. Thompson served as Director, Policy Staff, Capital Goods and International Construction, where she worked to eliminate foreign trade practices adversely affecting U.S. capital goods industries. She was actively involved in multilateral and bilateral negotiations, including renegotiation of the WTO Government Procurement Code. She also directed the activities of three bilateral Working Groups with the USSR. These Working Groups focused on trade in oil and gas, construction, and food processing equipment. Ms. Thompson held other positions in the Department of Commerce, including: Director, Capital Goods Division; Direc-

tor, Developing Nations Commercial Policy Division; Member, Negotiating Team, U.S.-Mexico Working Group on Electronics; Coordinator, U.S. Joint Economic Commissions for Saudi Arabia, Iran, Egypt and Israel; and Director, South Asia Staff, Office of Trade Policy.

She received her B.A. degree in economics from Winthrop College in South Carolina and her M.S. degree in economics from Florida State University. Her thesis examined the relationship between oligopoly theory and antitrust legislation.

## REFERENCES

- Besiktepe, S. T., U. Unluata, and A. Bologa. 1999. *Environmental Degradation of the Black Sea: Challenges and Remedies*. NATO Science Series, Kluwer Academic Publishers, Dordrecht, The Netherlands, May.
- National Energy Policy Group. 2001. *National Energy Policy: Report of the National Energy Policy Development Group*. U.S. Government Printing Office, Washington, D.C., May, pp. 8-12 and 8-13. Available online at <http://www.netl.doe.gov/publications/press/2001/nep/nep.html>.
- Thompson, M. K., and M. V. Lapsa. 2001. "Communication across the Black Sea via Internet Technology," in *Proceedings of the 2001 International Oil Spill Conference*, American Petroleum Institute, Publication Number 14710 B, Washington, D.C., March, pp. 1119-20.
- Thompson, M. K., M. V. Lapsa, and R. B. Shelton. 2003. "Communications and Data Exchange via the Black Sea and Caspian Sea Environmental Information Center (<http://pims.ed.ornl.gov>)," in *Proceedings of the 2003 International Oil Spill Conference*, American Petroleum Institute, Publication Number 14730 B, Washington, D.C., April, Paper Number 537.
- Thompson, M. K., M. V. Lapsa, and R. B. Shelton. 2004. "Utilizing Information Technology—The Black Sea and Caspian Sea Environmental Information Center (<http://pims.ed.ornl.gov>)," in *Proceedings of Interspill 2004, Clean Seas: Global Concern—Local Solutions*, Norwegian Coastal Administration, Proceedings on CD-ROM, Trondheim, Norway, June, Paper Number 452.