

RISK newsletter

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SRA 2000 Annual Meeting Update

“Applications of Risk Analysis in Industry and Government”



3-6 December, Crystal Gateway Marriott, Arlington, Virginia

John Ahearne, SRA President-elect and Annual Meeting Committee Chair

The Society for Risk Analysis (SRA) is facing a time of challenge. It has established itself in the health sciences field, but has fallen behind in important technology risk areas. That is why my focus for the SRA 2000 Annual Meeting plenary sessions on Monday and Tuesday mornings is to reemphasize some areas where we as a Society can usefully increase our efforts.

Terry Yosie, a senior member of the American Chemistry Council, will get us thinking along those lines as he leads off the sessions with his talk, “Risk Analysis at the Crossroads: Science, Values, and Choices.” For the second talk on Monday morning we are pleased to have as a speaker Curt Suplee, science writer for *The Washington Post*. He will tell us how the press looks at what we do in his talk, “Where Are Standards?—Putting Risk in Perspective in the Popular Press.”

Elisabeth Paté-Cornell of Stanford University will focus on risk analysis in engineering, an area I believe on which we need increased emphasis in SRA, in her Tuesday morning talk, “Finding and Fixing Systems Weaknesses: Probabilistic Methods and Applications of Engineering Risk Analysis.” Jack Moore, Sciences International Inc., will then point out some areas in which risk analysis has not

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Preliminary Programs for the SRA 2000 Annual Meeting have been mailed to members and can also be found on the SRA Web site at <http://www.sra.org/00preliminary.pdf>.



The Society for Risk Analysis (SRA) is an interdisciplinary professional society devoted to risk assessment, risk management, and risk communication.

SRA was founded in 1981 by a group of individuals representing many different disciplines who recognized the need for an interdisciplinary society, with international scope, to address emerging issues in risk analysis, management, and policy. Through its meetings and publications, it fosters a dialogue on health, ecological, and engineering risks and natural hazards, and their socioeconomic dimensions. SRA is committed to research and education in risk-related fields and to the recruitment of students into those fields. It is governed by bylaws and is directed by a 15-member elected Council.

The Society has helped develop the field of risk analysis and has improved its credibility and viability as well.

Members of SRA include professionals from a wide range of institutions, including federal, state, and local governments, small and large industries, private and public academic institutions, not-for-profit organizations, law firms, and consulting groups. Those professionals include statisticians, engineers, safety officers, policy analysts, economists, lawyers, environmental and occupational health scientists, natural and physical scientists, environmental scientists, public administrators, and social, behavioral, and decision scientists.

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Web Site
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been useful in government in his Tuesday morning talk, "Use and Misuse of Risk Analysis in Government."

Through these talks in these two sessions and the many other sessions at the meeting, I hope to set the stage for the Society to look at the things we've done well and to recognize that the Society's reputation has atrophied in other areas.

It is important for SRA members to come to the meeting, to listen, and to participate.

“Performing an Ecological Risk Assessment

Workshop #8 was inadvertently left out of the Preliminary Program that was mailed to SRA members. The full-day workshop, "Performing an Ecological Risk Assessment" (organized by Bruce Hope and Bob Fares), is intended for current risk assessment practitioners desiring increased familiarity with methods for performing ecological risk assessments. It may not be suitable for individuals without some experience with the risk assessment process. This workshop will emphasize the technical, as opposed to the management, aspects of ecological risk assessments. It will cover (1) problem formulation (including integrating available information to identify stressors, receptors, and exposure pathways; asking the right question(s); selecting stakeholder-credible assessment endpoints, manageable risk hypotheses, and appropriate measures of exposure and effect; the unique features of ecological conceptual models; ways of screening to focus the assessment), (2) exposure analysis (including collection and use of empirical data, uses and abuses of quantitative exposure models, methods for explicitly considering spatial/temporal factors in exposure estimation, model calibration and validation), (3) ecological response analysis (including species sensitivity curves, challenges posed by toxicological data [or the lack thereof], interspecies extrapolations with safety and uncertainty factors, obtaining effects data from field and laboratory investigations), (4) risk characterization (estimating ecological risks using quotient, probabilistic, and weight-of-evidence methods, as well as interpreting and reporting risks), and (5) uncertainty analysis of all aspects of the risk assessment, employing both qualitative and quantitative methods. Throughout the workshop, there will be discussions of effective ways to communicate ecological risk information to risk managers and stakeholders.

Individuals interested in attending the workshop, which will be on Sunday, 3 December, from 8 a.m. until 5 p.m., may register on site for \$410.

President's Message

Risk and the Stakeholder Express

The risk field has gone through episodic infatuations with alternative “fixes” to the formidable challenges presented by assessing diverse risks and reaching wise decisions in messy situations. Alternately, we have over time pursued the metric that would provide a consistent approach to “how safe is safe enough?”, looked to risk comparisons as the proper analytic frame for decision making, and, for a period, before reality set in, elevated risk communication to the holy grail of risk management. Currently, we are on the stakeholder-involvement express, barreling down the rails of well-intentioned but often naïve efforts to address growing public concerns over risks, changed public expectations over the functioning of democratic institutions, and historic declines in social trust in those responsible for protecting public safety.

This journey abounds with allusion to democratic ideals and principles and the good things assumed to follow. Implicit throughout is the notion that broad public involvement, if achieved, is the principal route to improved decision making, especially where the risks are controversial and disputed. Other outcomes that can be expected, it is claimed, are increased trust in experts and decision makers, greater consensus among publics, reductions in conflict and opposition, greater acceptance of the project or proffered solution, and ease in implementation. The list is, of course, revealing as to whose interest is really at stake in many stakeholder processes.

The notion of stakeholder itself is a misnomer, of course. Typically, the person who holds the stakes in a wager is the neutral party who has no particular interest in the outcome and can be counted upon to act fairly. Stakeholders in current practice are customarily local activists who have a clearly defined role in the process or a material interest (or “stake”) in the outcome. Left out, meanwhile, are those who do not yet know their interests are at stake, whose interests are diffuse or associated broadly with citizenship, who lack skills and resources to compete, or who have simply lost confidence in the political process. Some would call them “spectators” of American politics—they make up the mainstream of communities and how to draw them into deliberative processes has been the enduring project of democratic theorists over the past century.

The long tradition of democratic theorizing provides some cautions concerning our current infatuation with the stakeholder express. Two principal justifications, both apparent since Aristotle, show up in writings over time for more democratic processes and institutions—that they are the means for (1) developing the full capabilities and dignity of the individual and/or (2) creating the “good” political society and governance system (and not, it should be noted, for improving individual decisions). These writings have also consistently noted how formidable such goals are and how numerous the pitfalls along the ways—participatory effectiveness is a learned skill that requires resources, it is cumulative and long-term in nature, it is cultural in that it requires participatory domains in the various spheres of one’s life (family, community, social networks, work, etc.). Similarly, social trust is a phenomenon built through socialization over many years into society and polity and further developed or modified as the result of unfolding encounters with authority, political processes, and outcomes of participatory experience. Developing effective participation, building trust, and orchestrating “good” decisions, these theories suggest, is not a “one time” thing but emerges through participatory cultures and supporting structures over long periods of time.

Currently, despite countless books, articles, and reports on public participation, we know relatively little about which participatory interventions are likely to be successful, or even what success means, in different communities and social settings. Clearly, success is not smoothing the way for experts or proponents to achieve agency or project goals but entails deeper questions as to what the process does for a community’s or individual’s capabilities to deal with the next issue that comes along, the scope of the outcomes (positive and negative) achieved, the extent to which those stakeholders involved communicate with constituents, and how these stakeholder efforts support, rather than usurp, the established political process and elected officials. Properly viewed, stakeholder programs are all experiments aimed at addressing deficiencies in the existing political process (or they would not be needed), and some consideration and protection should be provided to those on whose behalf experiments in democracy are being conducted. This is not to say that we should reduce in any way our commitment to improved democratic processes; that commitment should be strengthened and deepened.

But perhaps it is time to put the brakes on the current stakeholder express, or to switch to the local, so that these processes become much more reflective and self-critical, that they are goal—not technique—driven, that they are rigorously evaluated by independent parties, that potential abuses (e.g., kicking controversial issues to publics) are controlled, and that they are accountable to and collaborative with those in whose name the experiments are mounted.



Roger E. Kasperson



Journal Notes

Manuscript Submission Process for *Risk Analysis*

Elizabeth L. Anderson, Ph.D., Editor-in-Chief

By the end of the year, the manuscript submission process for *Risk Analysis* will be substantially improved. In the next few months, authors will be asked to submit manuscripts electronically on the World Wide Web. *Risk Analysis*, Blackwell Publishing, and ScholarOne, a computer firm hired by Blackwell, are working together to develop an interface where all facets of the submission, review, and acceptance and rejection processes are streamlined. The Web interface will substantially decrease the time between submitting a manuscript and receiving a final publication decision from the office of the Editor-in-Chief. Also, our central files will be replaced by this system. Here is a brief description of the improvements that will be implemented soon.

Submitting Author Center

Authors may submit their manuscripts electronically using a PDF format and will receive an Area Editor assignment and acknowledgment of receipt within hours of posting. Authors may track the review process from their desktop as reviews will be posted upon receipt and review by Area Editors.

Authors may revise their manuscripts and post the revisions online; the system will notify the Area Editor that revisions are available. Finally, authors may access and download forms and communications about their manuscripts including reviews, comments from Area Editors, acceptance/rejection decisions, and transfer of copyright forms. All information regarding each manuscript is secure and may be accessed only by the author and editorial staff.

Peer Review Center

Reviewers will access manuscripts and forward comments, suggestions, and reviews electronically. Area Editors will assign or request reviewers electronically. All review manuscripts will be "blind" copies so that the review remains confidential and the manuscripts' authors and affiliations remain secure. Reviews may be posted online after Area Editor release.

Area Editor Center

Area Editors will be notified of new manuscript submissions electronically and will access those papers electronically. All processes, including receipt, review, revision, acceptance, and rejection may be handled electronically in this Center.

Administration Center

Editorial staff may access each manuscript in order to ascertain status, generate reports, and assign accepted manuscripts to journal issues. All communications from the Editor-in-Chief may be generated from the Web site.

This new system should substantially shorten turn-around time between submission and a publication decision. Authors may track status, Area Editors may update reviews, and editorial staff may conduct administrative duties, all electronically. All mail and communication times will be virtually eliminated with the installation of this system. Notice that the new system is ready to receive manuscripts and instructions will be posted on the SRA Web site, announced in the *RISK newsletter*, and printed in the Journal. I am pleased with the new system and look forward to realizing the advantages it offers. ◇◇



Committees

Public Policy Committee

Jack Fowle, Chair

The Public Policy Committee is seeking input from interested members of the Society to help it plan activities for the upcoming year. An informal meeting will be scheduled in conjunction with the Annual Meeting for this purpose, so please attend if you are interested.

For further information, contact Dr. Jack Fowle at 202-564-4547, fowle.jack@epa.gov, or Dr. Leslie Hushka at 908-730-1064, ljhushk@erenj.com.

History Committee

Paul Deisler, Cochair

Your Recollections Are Needed to Help Compile a History of the SRA

Past Presidents Paul Deisler and Dick Schwing have been appointed by the SRA Council to prepare a history of the Society. In addition to material from various records, they hope to collect information from as many members as have information to give. Personal memories of events, turning points and how they came about—including pre-SRA events leading to

the Society's formation—or other historically significant matters that each member recalls will greatly enrich the written history.

Significant matters need not include only successes; other matters—e.g., policy initiatives, organizational efforts, etc.—which may not have moved forward can also shed light on the development of the Society. Please, therefore, if you have memories to share, send them to Paul Deisler at e-mail: sinprisa@earthlink.net, fax: 512-480-9810, or regular mail: 2001 Mountain View Road, Austin, TX 78703.

Membership/Diversity

Michael Greenberg, Cochair

An important goal of SRA is to increase the number of African, Latino, and Native Americans interested in the risk sciences. Michael Greenberg received a grant from the EXXON corporation to create internships for minority high school students. Two were recruited this summer and worked on public perception of the risk of brownfield sites. They read a good deal of literature, conducted field surveys, analyzed their survey results, and wrote papers describing their efforts. It is hoped this will serve as a model for similar endeavors by other SRA members. ◇◇



Risk Education Resources

Teaching Risk in the United Kingdom

Ragnar Löfstedt with Tim McDaniels

This column continues our review of graduate programs in risk and how they are offered to students. We turn our attention to the United Kingdom (U.K.), to be followed by updates from other countries. In the U.K., an increasing number of universities offer courses concerned with risk analysis. However, students interested in these courses face the same kinds of obstacles as students in North America. There are courses scattered in different kinds of programs such as engineering, resource management, health, or social sciences. But there are few (perhaps no) integrated graduate degree programs that specifically focus on risk.

As an example, let's consider the University of Surrey, where two courses are offered. One is a core "Risk and Safety" module within the Masters for Environmental Psychology Program. This module has been in operation for some eight years. The course covers three distinct areas: (1) risk perception with a focus on the work by Gilbert White and the psychometric paradigm, (2) risk communication, focusing on tools as well as theories and ideas, and (3) an introduction to risk management with a view to new trends such as the growing role of deliberation.

A second opportunity, this one found within the Centre for Environmental Strategy, comprises two courses on risk issues, each two weeks long. These are titled "Environmental Risks: Assessment, Perception, and Communication" and "Advanced Risk." These two courses, led by Ragnar Löfstedt, have three

distinct audiences: (1) engineering doctorate researchers, sponsored both by the Engineering and Physical Science Research Council and an industry company, (2) the Centre's M.Sc. students who are studying for an M.Sc. in environmental strategy, and (3) paying participants from industry and government institutions.

The Centre for Environmental Strategy has been running these two-week-long courses since 1993 with mixed success. During the first two years there was opposition from companies sponsoring the engineering doctorate students, who argued strongly that engineers have better things to do than to take courses on risk perception, communication, and management. This all changed following the Brent Spar controversy in 1995. After that, the risk modules were seen as an example of foresight and necessary for a solid education in this field. Guest lecturers for these modules include Dr. Peter Douben of the Royal Commission for Environment and Pollution, Dr. Robyn Fairman of King's College London, and Professor Ray Kemp, previous president of SRA Europe. To date the risk modules have led individuals within the engineering doctorate program to take up careers within risk communication and management.

Judging from the experience at Surrey, it seems that the issues of where graduate courses in risk are offered, and how students can gain access to them, are similar to North America. Next time we will consider the issue of whether designated graduate degrees in risk issues are a good model. ◇◇



SRA-Japan

Saburo Ikeda, Secretariat, SRA-Japan

Handbook of Risk Research

Handbook of Risk Research was published September 2000 by TBS Britannica, Tokyo, Japan (price 8,500 Yen = \$77.00). This book is edited by a special committee organized by the SRA-Japan Section (associate editors: Tohru Morioka, Yasuhiro Sakai, Saburo Ikeda, Hirotada Hirose, and Iwao Uchiyama—all present or previous section officers).

The 375-page book has eight chapters, each including an introduction and overview in each area of risk analysis and topics that are to be included (total topics equal 128). The chapters include (1) academic disciplines and practices in risk research, (2) health hazard, health risk, environmental risk, (3) countermeasures to natural and urban disasters, (4) coping with technological risks in advanced society, (5) analysis and management of socioeconomic risks, (6) science and method of risk assessment, (7) risk perception and communication, and (8) risk management and regulatory policy.

Millennium Project

A project team has been organized to carry out the Millennium Project on "a public consulting system for risk-based diagnosis, assessment, and decision making in environmental risk issues" which was selected from a good number of applications.

The primary purpose of the project is to disseminate a vast

amount of knowledge and information recently developed in the field of risk analysis to the public, including nongovernmental organizations, "private firms," and local government, to improve our society's skill and ability in "risk communication."

The project is funded by the Agency of Science and Technology, Japan, for three years (2000-2002) with \$30,000 as a first-year budget. Fifteen members from SRA-Japan are registered this year and will recruit more experts depending on the subjects to be implemented in the system.

The principal researcher is Prof. T. Morioka (Osaka University), former president of SRA-Japan.

SRA-Japan 2000 Annual Meeting

The SRA-Japan 2000 Annual Meeting will be held 18-19 November at Meij University, Tokyo. With the theme "Risk Society and Governance," the meeting will include two guest lectures: (1) Automobile Society and Risk Governance and (2) Millennium Project; Report and Panel Discussions on "SRA International Millennium Symposium: Risk and Governance"; three specially organized sessions: (1) Risk Governance in Municipal Government, (2) Risk Sharing and Stability in Socioeconomic Issues (Future Perspectives on Insurance Policy), and (3) Ecological Risk Assessment in the Formal EIA (How to Incorporate); and six ordinary sessions that include 34 presentations on various topics on risk analysis. A preprint of the proceedings, containing the content of each presentation, will be published. ◇◇



SRA-Europe

“Risks and Territories”

An international symposium on “Risks and Territories” is being organized by the UMR 5600 (unité mixte de recherche: Mixed Research Unit), a federation of French research laboratories associated with the CNRS (French National Centre for Scientific Research). The meeting, to be held 17-18 May 2001 in Lyons, France, will have the support of several French ministries and agencies and local authorities.

Although the theme of risk is currently the subject of extensive debate both in scientific and technical circles and in the world of politics and administration, the local and/or territorial dimension of endangering phenomena and their management and perception has so far failed to attract sustained attention. “Risks and Territories” will address this issue.

All types of risks—natural, technological, or sanitary—are involved, but not so-called “social” risks (petty crime, management of deprived areas, etc.), which belong to a specific category of problems.

The organisers wish to highlight the pluridisciplinary vocation of the symposium, stressing the spheres of sociology, ethnology, political science, history, economics, engineering science, and earth and natural sciences.

Risk has been provisionally defined not as a catastrophe, but as the representation of a possible danger implying collective damage. As far as possible, emphasis will be placed on the links between risks and territories.

The main topics of the symposium will include (1) scientific and technical knowledge of territorial risks, (2) risk management, and (3) risk perception: technical versus “ordinary” viewpoints.

SRA-E 2001 International Meeting

The SRA-E annual international meeting will take place 24-27 May 2001 in Lisbon, Portugal. More information will be posted soon on the SRA-E Web site (www.sraeurope.com) and included in the next issue of the RISK newsletter. ◇◇



Specialty Groups

Ecological Risk Assessment Specialty Group

Bruce Hope, Chairperson

The Ecological Risk Assessment Specialty Group (ERASG) would like to call attention to two workshops that will be offered on Sunday, 3 December 2000, immediately prior to the start of the SRA Annual Meeting in Washington, D.C.

The half-day workshop, “Introduction to Ecological Risk Management” (organized by Anne Sergeant), is designed for individuals (such as environmental managers and others making decisions with ecological information and project managers whose projects have an ecological component) who want to gain a basic familiarity with the terms and processes associated with ecological risk assessment (ERA). This workshop will provide participants with (1) an introduction to the key components of the ERA process, (2) a review of current national (U.S. EPA) and international (Canada) guidelines for conducting ERAs, and (3) an opportunity to gain familiarity with the ERA process and decision making. This workshop will emphasize planning and problem formulation and will allow time for discussion and case exercises. The following topics will be covered: (1) planning (roles of risk managers, risk assessors, and other interested parties, as well as the products of planning), (2) problem formulation (integrating available information, selecting assessment endpoints, conceptual model development, development of an analysis plan), (3) analysis (evaluating data and models, exposure characterization, ecological effects characterization), and (4) risk characterization (estimating ecological risks, describing risks, reporting risks). There will be a discussion of effective ways to relate ecological information to risk-management decisions and possibly one or two case exercises (one on problem formulation and another on the respective roles of risk assessors and risk managers).

The full-day workshop, “Performing an Ecological Risk Assessment” (organized by Bruce Hope and Bob Fares), was inadvertently left out of the preliminary program that you received in the mail. This workshop is intended for current risk

assessment practitioners desiring increased familiarity with methods for performing ecological risk assessments. More information on the workshop can be found on page 2 of this issue of the RISK newsletter.

Those who would like to join ERASG and become more involved in our plans for Washington, D.C., 2000 are encouraged to contact Bruce Hope by phone (202-690-6189) or e-mail (bkhope@hotmail.com).

Dose-Response Specialty Group

Peg Coleman, President

Thanks to all who participated in the many activities sponsored by the Dose-Response Specialty Group (DRSG) in 2000. DRSG is the only professional group in which I have been involved that offers a monthly connection to a diverse membership—a teleconference on the first Tuesday of each month from 3:30 to 4:30 p.m. This regular connection has been a source of both discipline and enjoyment for me as President. However, at our 5 December business meeting (Tuesday breakfast meeting at the SRA national meeting), I will be pleased to pass the baton for leadership of DRSG to Dr. Paul Schlosser, current Vice-President for Program Planning and President-elect. At the business meeting, we will vote on the amended bylaws that Paul posted for us (www.egroups.com/files/DRSG/DRSG+By-Laws+9-6-00%2Ertf) to govern our interactions in the coming years. At the 2000 business meeting, DRSG will also welcome four new DRSG officers (Secretary/Treasurer, Vice President for Program Planning, and two Trustees) who will be elected by e-mail ballot in November.

On a personal note, I am pleased to begin a year’s “sabbatical” within the U.S. Department of Agriculture, from the Food Safety and Inspection Service to the Agricultural Research Service. My detail will begin in October at the Eastern Regional Research Center (ERRC), Wyndmoor, Pennsylvania. The major United States contributions to the field of predictive microbiology (Pathogen Modeling Program, www.arserrc.gov/mfs/)

pathogen.htm) were developed there under the guidance of Bob Buchanan and Dick Whiting, now of the Food and Drug Administration. I will be working under the direction of Drs. Mark Tamplin and John Luchansky in the Microbial Food Safety Research Unit of ERRC. The detail is envisioned to bring more science into microbial risk assessment and more direct targeting of risk assessment data gaps for new research projects that might reduce uncertainty in predicting risks of foodborne illness. January will bring me to the University of Maryland Eastern Shore (UMES) in Princess Anne. Dr. Dolores Spikes, President of UMES, and Dr. Carolyn Brooks, Dean of the School of Agricultural and Natural Sciences, are eager to link researchers and modelers on their campus with the community of professionals in the Society for Risk Analysis.

October Open Forum

Three highlights in DRSG's activities this year have been stimulating Open Forum discussions in March, June, and, most recently, October. Past President Elisabeth Reese, who initiated the Open Forum discussion format, led our most recent considerations on 3 October of "Tolerable Upper Intake Levels" (ULs), defined as the highest level of daily nutrient intake that is likely to pose no risk of adverse health effects to almost all individuals in the general population.

Three guest speakers from the Food and Nutrition Board's Subcommittee on Upper Reference Levels of Nutrients at the Institute of Medicine joined the teleconference: Steve Taylor, professor and head of the Department of Food Science and Technology and director of the Food Processing Center at the University of Nebraska; Sandra Schlicker, senior program manager at the Food and Nutrition Board of The National Academies; and Rita Messing, Minnesota Department of Health. Unfortunately, Joe Rodricks, a leader in this work who needs no introduction to SRA members, was unable to participate in the Open Forum.

Elisabeth presented background materials from the chapter "A Model for the Development of Tolerable Upper Intake Levels for Nutrients" that highlighted differences between considerations for nutrients with beneficial and potential adverse effects and the more traditional hazards that usually occupy chemical risk assessors. Since human clinical data and human case reports are often available for nutrients, uncertainty factors are generally low, but clearly controversial. Drs. Schlicker and Taylor presented information using vitamin E as a specific example to illustrate an application of the model developed by the committee.

The DRSG members participating in the Open Forum discussion were particularly interested in comparisons between data of different sources for the vitamin E example: a large human clinical trial known by the acronym ATBC, human case reports of potential adverse effects, and clinical studies with laboratory rats. Data quality, uncertainty factors, and separating variability and uncertainty were all topics of our conversation. More documentation on ULs for nutrients can be obtained from Elisabeth (ereese@nas.edu) or www.NAP.edu under bookstore.

Joint Mixer

The DRSG and Risk Communication Specialty Group are planning to jointly host a mixer at the SRA meeting on Monday, 4 December, from 5:30 to 6:30 p.m. at the conference hotel, the Crystal Gateway Marriott in Arlington, Virginia. The DRSG Student Awardee for 2000 will be honored at the mixer, and a short program on the topic of communicating to the public about dose-response and the "precautionary principle" is another highlight planned for this gathering. Refreshments will be available.

News from the DRSG Vice Presidents

Paul Schlosser, the Vice President for Program Planning (schlosser@ciit.org), has already led DRSG members to embrace enhancements in communication within and beyond DRSG through establishment of two list servers (DRSG@egroups.com and BioMechModel@egroups.com). The preliminary program for the national meeting is posted on the SRA Web site (www.sra.org/00preliminary.pdf).

Lynne Haber, the Vice President for Education (haber@tera.org), is proceeding with review and selection of our student awardee for 2000, with help from other DRSG members. Students are encouraged to start thinking about submitting an abstract for next year's award.

Membership

New members are welcome. Although DRSG does request an additional annual dues fee of \$15, feel free to check us out as a guest on a conference call on first Tuesdays from 3:30 to 4:30 p.m. at 202-260-7280, access code 0577#. This monthly conference call is made possible through the support of the Environmental Protection Agency. New members are also welcome to subscribe to one or both DRSG list servers.

Contact Info

For additional information about DRSG activities, please contact the current President, Peg Coleman (peg.coleman@usda.gov, 202-690-6468, fax: 202-690-6414).

Risk Science and Law Specialty Group

Wendy Wagner, Chair

The Risk Science and Law (RSL) Specialty Group has a terrific schedule of events for the SRA Annual Meeting. The Specialty Group meeting will take place from 5 to 6 p.m. on Tuesday, 5 December (the precise location will be announced in the final program). Among the agenda items will be the possibility of a stand-alone workshop and the preparation of a slate for next year's officers. The RSL Specialty Group's four sponsored symposia/poster sessions are currently scheduled back-to-back from 3:30 to 5:20 p.m. Monday and from 10:30 a.m. to 5 p.m. Tuesday, 4 and 5 December. If you would like a detailed description of the Specialty Group's symposia with the speakers' abstracts in advance of the Annual Meeting, contact Wendy Wagner at wagner9@atlglobal.net.

The RSL Specialty Group has also begun soliciting contributions for its biannual poster session titled "Risk Analysis in the Courts: A Roadmap for Risk Analysts" (the 1998 version is available online at <http://www.riskworld.com/risksciencelaw/> [click "Online Casebook"]). This year we decided to modify our format to include more analysis and commentary on cases of particular interest. To that end, we are looking for examples of cases where courts handled a risk assessment particularly well or particularly badly. If you have such a case(s), please provide us with a short paragraph identifying the case, explaining what the court did with the risk assessment, and discussing those features of the court's opinion that you consider particularly thoughtful or misguided. To participate in this year's effort, simply e-mail your contribution(s) to Wendy Wagner at wagner9@atlglobal.net (WORD attachments preferred). (If e-mail is difficult, please call Wendy at 440-892-3433). All contributions must be received by no later than 25 NOVEMBER in order to be included in this year's poster session. ◇◇◇



Regulatory Risk Review

Brave New Risk World

David Clarke, American Chemistry Council

When more than 100 risk assessors, epidemiologists, toxicologists, and others met in Aspen, Colorado, 16-18 August to explore "Future Research for Improving Risk Assessment Methods: Of Mice, Men, and Models," the conclusion was inescapable: the genomics revolution is here! Proteomics, transcriptomics, biogenetics—a brave new world beckons risk assessors, and it is a world whose shores will be battered by a tsunami of data spawned by scientists' increasing knowledge about genetics.

In opening remarks to the workshop, Paul Schulte of the National Institute for Occupational Safety and Health (NIOSH) commented on a number of challenges facing risk assessment. Mixtures and synergistic effects. Risks to subgroups and the impact of the genetics revolution on this issue. The incorporation of biological information into risk assessment. The need to find different ways to present risk information to decision makers and the public. The harmonization of risk assessment across organizations and nations. If risk assessors didn't feel challenged before, they should now.

Taking up some of Schulte's themes, NIOSH's Leslie Stayner noted that new areas of uncertainty in risk assessment are opening up with the growing focus on biomarkers, human variability, and susceptibility. Stayner also spoke of controversies that continue to beleague risk assessment, including its expense, its slowness, and its controversial methods. "What should we do?" Stayner asked, noting that NIOSH and other organizations hope to address both new and familiar challenges through research. In fact, the workshop's practical goal—as suggested by its title—was to develop a research agenda to improve risk assessment. And, as expected given the growing complexity of risk assessment, the approach Stayner and others are promoting is interdisciplinary, involving not just toxicology—which once dominated the field—but also industrial hygiene, epidemiology, statistics, and other disciplines. Once the workshop proceedings are published next year, count on "the -omics

revolution" to stand at the crossroads of risk assessment, pointing toward the brave new directions risk assessors will have to travel if their field is to continue improving.

Improvement of risk management was the purpose of another workshop, held 1-2 May in Arlington, Virginia, whose proceedings were published this month. The workshop on "Convergence of Risk Assessment and Socioeconomic Analysis to Better Inform Chemical Risk Management Decisions" brought

together economists and risk assessors to develop a framework for better collaboration between these two disciplines, which must work together to develop the analysis of regulatory options that decision makers rely on. While the challenges of collaboration between economists and risk assessors may appear less daunting than the challenges posed by the "genomics revolution," they are nevertheless equally important. To be useful,

better risk assessments—including those that incorporate new genetic information—will have to be better linked to socioeconomic analyses, which in turn should help produce better societal risk management decisions. With that hope in mind, the Organization for Economic Cooperation and Development plans to use the workshop proceedings in developing guidance and in furthering its Project on Socioeconomic Analysis.

Workshop participants came up with a number of specific recommendations to achieve better "convergence." Further workshops and meetings, case studies, in-depth interviews between risk assessors and economists, a primer to generate a common language, and a list server and/or Web site were among proposals listed in the proceedings. In addition, the proceedings define a set of principles. Among these is the statement that "collaboration and integration are fostered when risk assessors and economists adapt their analyses to meet each other's changing needs and situations."

Whatever uncertainties the future holds for risk assessors, one thing is certain: interdisciplinary collaboration will be the watchword, and Rodney King's "Why can't we all get along?" may become the motto of the -omics revolution, including the *socioeconomics* revolution. ◇◇◇

... the genomics
revolution is here!

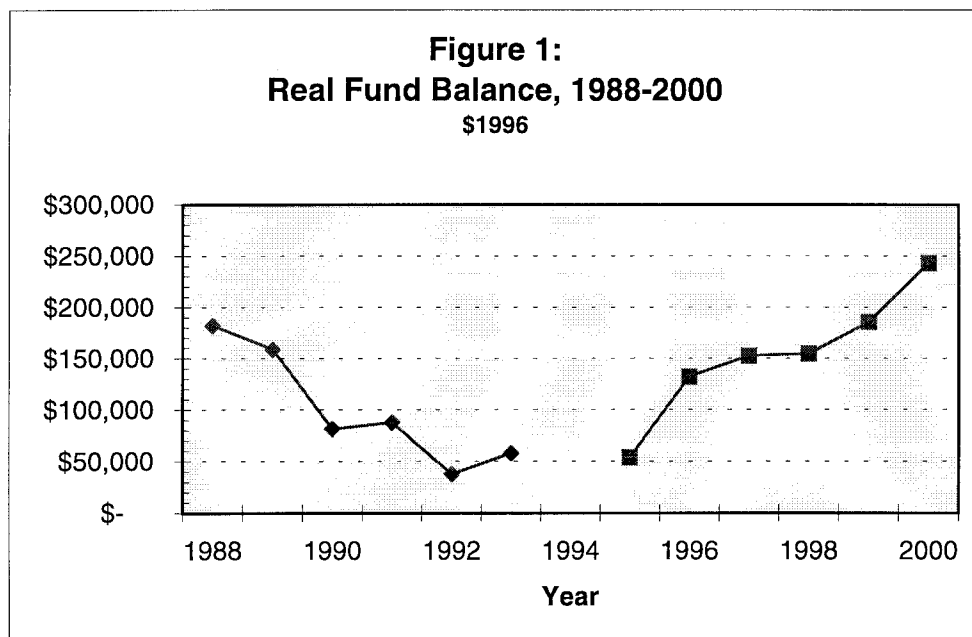
Back issues of the RISK newsletter can be found on the Web—1997-2000 on the Society for Risk Analysis Web site (www.sra.org) and 1995-1996 on a site maintained by RiskWorld (www.riskworld.com/Abstract/AB9ME001.HTM).

A Short Update on SRA Finances

Richard B. Belzer, SRA Treasurer (1998-2000)

Over the past two years, the SRA has had significant success improving its financial position. This is an essential task before the Society expands its programmatic efforts related to risk analysis and education. Without significant resources, our programs will not succeed regardless of their merit.

Figures 1 and 2 summarize the Society's financial position based on data obtained from the SRA Secretariat. (Breaks in each series reflect missing values.) Our fund balance represents the total amount of capital SRA has accumulated since its creation nearly 20 years ago. It is, therefore, the best single measure of SRA's financial health. Fund balance per capita indicates the amount of capital SRA has accumulated per member.



Although inflation during the period 1988 to 2000 has tended to be low, over the past 13 years it has reduced the real value of nominal dollars by about 33 percent. Thus, I have converted nominal fund balance data obtained from the SRA Secretariat into real 1996 dollars using the GDP deflator, a standard measurement of inflation. This eliminates the distorting effect of inflation and the temptation to misinterpret rising nominal values as evidence of financial success. It also has the visual effect of flattening the trend lines shown in the two figures.

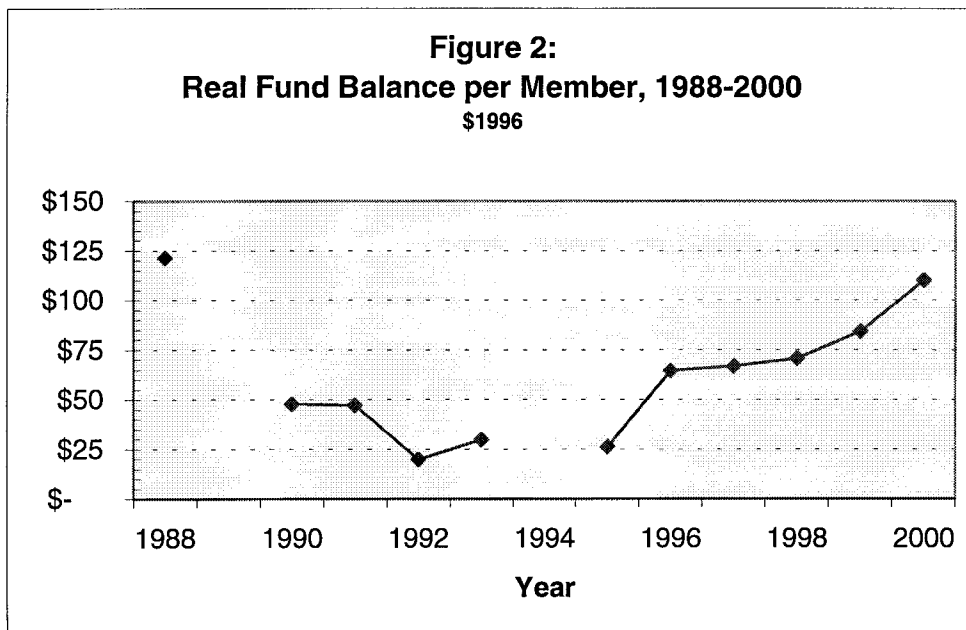
Figure 1 illustrates how real fund balances have varied over the past 13 years, from a low of about \$37,000 in 1993 to a forecast high of about \$243,000 in

2000. While figures for 1999 are still provisional and 2000 is forecast, I expect that both years will ultimately prove to be the best in the Society's recent history based on this summary measure of financial performance.

Figure 2 shows that real per capita fund balances have followed the same pattern during this period, from a low of about \$20 per capita in 1992 to a high of about \$120 in 1988. In 2000, I forecast that we will have restored our real per capita fund balance to about \$110.

Despite these recent improvements, our fund balance figures remain disturbingly low for a professional organization almost 20 years old and boasting an annual budget exceeding \$500,000. In 2000, I project that our fund balance will still amount to just 50 percent of annual outlays. This represents an extremely small reserve and continues to hamper SRA's capacity to fulfill its mission.

Gains expected in 2000 and beyond arise primarily because of our decision to change publishers for *Risk Analysis*. This change has enabled the Society to indefinitely capture a much larger share of the value of our flagship journal. In 2001, we will pursue additional strategies to improve the SRA's long-term financial health.





Chapter News

Research Triangle Chapter

Bob Hetes, President

Update on Current Officers

The current officers of the Research Triangle Chapter of the Society for Risk Analysis (SRA-RTC) include President-elect Paul Schlosser, CIIT; President Bob Hetes, U.S. EPA; Past President Jonathan Wiener, Duke University; Councilor Rob DeWoskin, U.S. EPA; Councilor Shawn Sager, ARCADIS Geraghty & Miller, Inc.; Treasurer Elainea Kenyon, U.S. EPA; and Secretary Justin Teeguarden, ICF Consulting.

SRA-RTC is currently looking for candidates for next year for Treasurer, President-elect, and Councilor. If anyone is interested please contact Paul Schlosser at schlosser@ciit.org or 919-558-1243.

Annual Workshop

Barriers and Bridges: Integrating Health and Ecological Risk Assessment

The SRA-RTC (along with the Carolinas Chapter of the Society of Environmental Toxicology and Chemistry) cosponsored a workshop on integrating human health and ecological risk assessment. The workshop, "Barriers and Bridges: Integrating Health and Ecological Risk Assessment," was held Monday and Tuesday, 30-31 October 2000, at the McKimmon Center of North Carolina State University, Raleigh, North Carolina.

Environmental managers must make decisions that are protective of both human health and the environment. These decisions should be, but rarely are, based on information that integrates both health and ecological risk assessments. The objective of this workshop was to bring together scientists practicing in the areas of health risk assessment and ecological risk assessment to explore similarities and differences in their respective approaches, enhance the dialogue between these two practices, and explore tools that can promote more integrated risk assessments.

The first day of the workshop began with an overview of the "state of the science" in each arena. This was followed by case studies that presented the ecological and human health approaches in two different contexts: chemical-specific versus site-specific risk assessments. The day concluded with a presentation on a new "Framework for Integration of Health and Ecological Risk Assessment." The second day highlighted specific topics that offered opportunities for comparisons and controversies and concluded with a thought-provoking panel discussion.

Recent Seminars

SRA President-elect John Ahearne, Sigma Xi, gave the presentation "Scientists, Policy Makers, and the Public: A Needed Dialogue." The presentation drew on Dr. Ahearne's vast experience and focused on effective incorporation of scientific knowledge into public policy which requires effective dialogue among scientists, policy makers, and the general public. How can this be accomplished so that all groups have confidence in the processes leading to policies?

Dr. Michael Rogers gave a presentation on "Genetically

Modified Plants and the Precautionary Principle." Rogers is currently a European Fellow at Duke University and is a senior member of the European Commission's Forward Studies Unit, a multidisciplinary think-tank that reports directly to the president of the Commission and is charged with carrying out prospective studies on the evolution of Europe.

Jerad Bales, a hydrologist with the U.S. Geological Survey in Raleigh, gave a presentation on real risks in North Carolina, specifically "1999 Flooding in Eastern North Carolina and Estimation of Flood Risks." Dr. Bales discussed the combined effects of Hurricanes Dennis, Floyd, and Irene in September and October 1999 which resulted in two months of flooding throughout most of eastern North Carolina. Flooding was at record levels and 500-year or greater floods occurred in all of the state's river basins east of Raleigh. During and after the floods, there was great concern about the status of flood maps, the estimates of flood risks, and probability of future flooding in North Carolina. Flood risks are often presented simplistically to the public and to decision makers, so risks can be underestimated. In fact, the science of estimating flood risks is quite complicated and results can be difficult to convey to those making policy.

SETAC-SRA Chapitre Saint-Laurent

Louis Martel, Head of the 2000 Annual Symposium, Scientific Committee, and Past President of the Chapitre Saint-Laurent
Sylvain Loranger, President of the Chapitre Saint-Laurent
Peter Campbell, President of the 2000 Annual Symposium

This year, the SETAC-SRA Chapitre Saint-Laurent held its fourth annual symposium at the Château Bonne Entente in Sainte-Foy, near Quebec City, on 8-9 June 2000. The theme was "Environmental Quality: Concept and Tools." The symposium was a great success, with over 125 participants from academia, government, industry, and the consulting sector.



Dr. Peter G. C. Campbell
from the University of
Quebec-INRS-Eau,
president of the fourth
annual symposium.

The first day of the symposium started with a plenary session involving a guest speaker and two keynote speakers. Ms. Suzanne Giguère, Head of the Environmental Assessment and Coordination Directorate of Quebec Ministry of Environment, opened the symposium with a talk on the increasing complexity of environmental management and the corresponding need to study environmental problems with multidisciplinary approaches.

Her talk was followed by the first keynote address, given by

Dr. Émilien Pelletier of the Rimouski Institute of Marine Sciences, who asked the question "Ecosystem Health: Have We Correctly Understood the Message?" and identified certain answers with the aid of a review of the tributyltin story. This interesting analysis was followed by the second keynote address during which Dr. Éric Dewailly from the Quebec Public Health Directorate discussed, on a population scale, the importance of the protection of aquatic environment for the human species. The title of his presentation was also provocative: "Homo Aquaticus: an Endangered Species?" This plenary session was followed by a dynamic poster session with 16 presentations and two parallel platform sessions of six presentations each.



A successful poster session

After this first day of scientific programs, the Chapitre Saint-Laurent held its annual corporate meeting, during which the 2000-2001 Board of Directors was selected: President Sylvain Loranger, QSAR Risk Assessment Service Inc.; Vice-President Monique Boily, TOXEN-UQAM; Treasurer Raynald Chassé, Quebec Center of Expertise in Environmental Analysis; Secretary Bertin Trotier, TOXEN-UQAM; Past President Louis Martel, Quebec Center of Expertise in Environmental Analysis; and Directors Louise Champoux, Canadian Wildlife Service-Environment Canada; Anne-Marie Lafortune, Quebec Center of Expertise in Environmental Analysis; and Daniel Morin, Dessau Soprin Inc.

This first day ended with a social activity allowing informal discussions and networking.

The second day began with another set of parallel platform sessions allowing the presentation of 15 communications, including a special session on the effects of metals on the receiving environment.

After lunch, a workshop was held on the theme "Environmental Quality: How Far Should We Go?" Under the direction of André Delisle from Transfert Environnement, the following participants were invited to address this topic: Louis J. Moulins from Noranda Inc., Marc Sinotte from Quebec Ministry of Environment, Jacques Grondin from the Research Unit in Public Health of the Laval University's Hospital Center, Michel Fournier from the University of Quebec (INRS-IAF), and Michel Poulin from the Canadian Museum of Nature. Many questions were then raised from the audience and an interesting debate followed.

The symposium ended with the Student Awards presentation. The laureates were:

- Best oral presentations: Mr. Ahmed Siah from Rimouski Institute of Marine Sciences (first place: 200\$ from Chapitre

Saint-Laurent) and Mr. Claude Fortin from University of Quebec-INRSEau (second place: 50\$ from SETAC and 50\$ from SRA).

- Best poster presentations: Mr. Olivier Perceval from University of Quebec-INRS-Eau (first place: 200\$ from Chapitre Saint-Laurent) and Ms. Anick Giguère from University of Quebec-INRS-Eau (second place: 50\$ from SETAC and 50\$ from SRA).



Laureates of the Student Award competition: left to right, Messrs. Claude Fortin, Sylvain Loranger (president of the Chapitre Saint-Laurent), Ahmed Siah, and Olivier Perceval. Ms. Anick Giguère is absent on the photo.

We would like to thank all the members of the organising committee and the volunteers who helped us to make this Symposium a success.

The Chapitre Saint-Laurent is also grateful to our sponsors for their generous financial support: Quebec Center of Expertise in Environmental Analysis, Hydro-Québec, Fisheries and Oceans Canada, Alcan Ltd., Saint-Lawrence Center-Environment Canada, INRS-Eau, University of Quebec, Perkin Elmer Instruments, TOXEN, University of Quebec at Montreal, Quebec Ministry of Natural Resources, Quebec Ministry of Environment, Transfert Environnement, and Shell Ltd.

Our next annual symposium will be held in Montreal next spring under the presidency of Dr. Gaston Chevalier from the CIRTOX Research Centers and the TOXEN of the University of Quebec at Montreal. Those interested in participating in its organisation are invited to contact a member of the Board of Directors.

This year, apart from the annual symposium, the Chapitre Saint-Laurent also organised monthly seminars alternating between Montreal and Quebec City.

Also of interest, a new Chapitre Saint-Laurent Grant Program for M.Sc. and Ph.D. students will be launched in the next few months. For its first year, this program will consist of two grants totalling 4000\$. More details on this Grant Program can be obtained from our Web site (www.chapitre-saint-laurent.qc.ca).

Note that this is a new address corresponding to our new Web site. All the information pertaining to Chapitre Saint-Laurent's activities will be available at this Web site.

Finally, we have recently initiated a discussion list exclusively reserved for members of Chapitre Saint-Laurent. This list is a dynamic place to exchange opinions and ideas on subjects relating to environmental toxicology and chemistry and risk assessment and management.

For additional information about the Chapitre Saint-Laurent, we invite you to visit our new Web site (www.chapitre-saint-laurent.qc.ca).

New England Chapter

Harlee Strauss, President

New Officers

Congratulations to the newly elected officers of the New England Chapter of SRA (SRA-NE): President-elect Joseph Regna and Secretary Karen Vetrano. Arlene Levin has been reelected as Treasurer and Jo Anne Shatkin assumes her new role as Past President.

2000-2001 Seminar Program

This year's seminar series is organized around several themes of widespread interest within SRA-NE: work with communities, principles and practices in environmental decision making, and demonstrable health risks from environmental toxicants with a focus on asthma.

The 13 September meeting was a roundtable discussion of activities/organizations that individuals have given their time to (pro bono) that utilize their technical knowledge. The focus was on local government or citizens groups, not professional organizations or national boards.

Attendees exchanged ideas with other environmental/risk assessment professionals who engage in pro bono activities, found out about available opportunities, and learned how others got involved.

There is widespread enthusiasm within SRA-NE for setting up some sort of pro bono activities, and a committee has been formed to look into this further. If anyone belongs to an organization that has a pro bono component, we would welcome your input into how it is organized and how it works. Please contact Harlee Strauss (508-651-8784, hstrauss@mediaone.net).

The 11 October meeting, "The Precautionary Principle: Two Perspectives on its Implications for Environmental Policy," focused on the Precautionary Principle, which is an important but controversial element in decision making. The two speakers, David Ropeik of the Harvard Center for Risk Analysis and Joel Tickner of the University of Massachusetts Lowell, gave their different perspectives of the Principle.

Two speakers discussed decision making in terms of drinking water disinfection at the 8 November meeting. Steve Estes-Smargiassi of the Massachusetts Water Resources Authority (MWRA) talked about some of the considerations in the MWRA decision to use ozonation rather than chlorination as the primary disinfectant at the Walnut Hill drinking water treatment plant now under construction. Josh Cohen of Harvard's Center for Risk Analysis talked about a cost-benefit analysis he conducted for EPA regarding disinfection treatment alternatives.

The spring seminar series dates are 10 January, 8 February, 14 March, 11 April, and 9 May.

The February meeting will be held jointly with Licensed Site Professionals Association, the certification association for people doing environmental cleanups in Massachusetts, including engineers and risk assessors working primarily in waste site cleanup.

At the February meeting Charlie Menzie will speak on ecological soil standards. Many of the other spring meetings will focus on asthma.

MWRA Project

The MWRA project was initiated by Doug MacDonald (Executive Director of MWRA) and his able staff following a presentation he gave at an SRA-NE meeting over a year ago. The MWRA supplies drinking water and/or wastewater services to Boston, Cambridge, and many other communities in Massachusetts.

The project was based on MacDonald's recognition that MWRA is in the "risk business" as the supplier of drinking water and sewer services to Boston and many surrounding communities. He then asked SRA-NE to come to the MWRA and help look at the risks through professional eyes. After several meetings and letters, it became clear that MWRA needed more than an ad hoc group from SRA-NE. To be attentive to the spectrum of risks that MWRA faces (public health, environmental, institutional, financial, security, etc.), an expert panel had to be invited with expertise beyond what we could offer as a chapter.

Four longtime SRA-NE members—Barbara Callahan, Dale Hattis, Jo Anne Shatkin, and Harlee Strauss—were on the expert panel along with others from the Greater Boston area and beyond. The panel was chaired by SRA Past President Elisabeth Paté-Cornell of Stanford University. David Ropeik, one of our SRA-NE October speakers, is writing up the panel report.

SRA-NE Membership

For information on membership in the SRA-NE chapter contact President Harlee Strauss (508-651-8784, hstrauss@mediaone.net) or Secretary Karen Vetrano (860-298-6351, kvetrano@trcsolutions.com). ◇◇

Abstracts from 1999 Society for Risk Analysis Annual Meeting Now Online at RiskWorld

Abstracts of the 373 papers presented at the 1999 meeting of the Society for Risk Analysis, held in Atlanta, Georgia, 5-8 December, are now online at RiskWorld. With the theme "The Future of Risk in the 21st Century," the meeting highlighted the changing nature of risk, global and transboundary risk issues, new approaches to risk management, and trends in public values and democratic processes to be expected in the coming century. To view the abstracts, go to <http://www.riskworld.com/> and select "Abstracts Library" in the list of RiskWorld departments on the left.



News and Announcements

Assessment and Management of Environmental Risks: Methods and Applications in Eastern European and Developing Countries

Summary of the 1-4 October 2000 NATO Advanced Research Workshop in Lisbon, Portugal, organized by Drs. Igor Linkov of Menzie-Cura & Associates, USA, José Palma-Oliviera, University of Lisbon, Portugal, and Vladimir Baitchorov of the National Academy of Sciences, Belarus

Igor Linkov, José Palma-Oliviera, and Jo Anne Shatkin

Environmental contamination requires management decisions that weigh existing risks against the potential benefits and disruptions associated with policy implementation. The goal of the NATO Advanced Research Workshop (ARW) "Assessment and Management of Environmental Risks: Methods and Applications in Eastern European and Developing Countries" was to present risk assessment as a unified technique for providing a scientific basis for environmentally sound and cost-efficient policies, strategies, and solutions for various environmental problems.

After introductory plenary sessions that reviewed current developments in risk assessment methodology and tools, the debate between Glenn Suter (U.S. Environmental Protection Agency) and Jim Wilson (Resources for the Future) addressed the issue of whether the use of expensive risk assessments in developing countries can be justified, given their evolving regulatory institutions and limited resources. General agreement was reached that risks associated with environmental problems should be considered in developing environmental policies, while the application of the specific risk assessment methodologies (such as comparative risk assessment, probabilistic techniques, etc.) should be case specific and done on a benefit-cost basis.

The workshop agenda was designed to evaluate the utility of the risk-informed approaches in making decisions under budgetary constraints. This was done through group consensus and individual expert judgment elicitation. Three working groups were created during the workshop: (1) Data Uncertainty and Variability (Cochairs Joanna Jaworska and Todd Bridges), (2) Integrating Science and Policy in Environmental Risk Management (Cochairs Jo Anne Shatkin and James Valverde), and (3) Environmental Risk Assessment: Approaches and Tools (Cochairs Margaret MacDonell and Ivan Holoubek).

The objectives of the working groups were to review achievements, to identify gaps in the current knowledge base, and, if possible, to establish priorities for future research. An Individual Expert Elicitation was conducted according to a protocol that was developed by Drs. Igor Linkov and Louis Goossens prior to the workshop. The Individual Expert Elicitation was directed towards the optimal allocation of the research budget. The following is a partial list of recommendations that follow from the elicitation exercise and group discussions. The list focuses on activities and tasks aimed at developing cost-effi-

cient approaches to risk assessment, applicable for making decisions under budgetary constraints, with particular emphasis on developing countries:

1. Risk and uncertainty analysis should be decision- or policy-focused,
2. The level of analysis should fit the problem at hand; tiered approaches were affirmed by the group as useful,
3. Analyses in developing nations should not be overly simplified because of the lack of resources,
4. Weight-of-evidence approaches can be applied to address uncertainty,
5. Risk assessment can improve environmental decisions, but is not the only consideration—decision elements distinct from risk may be more important, such as cost, desirability, equity, and uncertainty,
6. Risk assessment may provide a structured basis for communication among the various interested parties,
7. The scientific basis of risk assessment is universal, but the value-laden assumptions and context are not and should be addressed in a decision-specific framework,
8. Stakeholder involvement is a crucial element of risk-informed decision making,
9. The process for public participation in environmental decisions must be iterative in nature, allow the participants a voice prior to the decision, and be open to all affected by a decision,
10. The risk assessment process should be harmonized and different types of risk assessment should be integrated.

One of the meeting objectives was to initiate joint activities between Institutes and Organizations. Among the ARW participants were representatives of government agencies, industry, private consulting firms, and academia. As a result of the discussions, the following joint activities were proposed:

1. Topical meeting on application of risk-based techniques in the developing Mediterranean countries (Egypt, 2002),
2. Development of Web-based resources for developing nations, such as an online SRA members' directory, Web sites, and newsgroups,
3. Outreach to organize new SRA chapters and sections in developing nations and to encourage collaboration among chapters and sections,
4. Course development to "Train the Trainer" or teach educators the tools of risk assessment.

According to many participants, the workshop was unusual because it provided space for informal discussions rather than just regular plenary presentations. Although 23 countries were represented, the number of participants was relatively small and allowed fruitful discussions in the working groups and between participants. The meeting gave participants new insights and contacts, and many formal and informal collaborations were established. The Proceedings of the Workshop, *Assessment and Management of Environmental Risks: Cost-Efficient Methods and Applications* edited by I. Linkov and J.M. Palma-Oliviera, will be published by Kluwer Academic Publishers, Dordrecht, Netherlands, in 2001.

ILSI Risk Science Institute-Model Peer Review Center of Excellence Project

The International Life Sciences Institute (ILSI) Risk Science Institute (RSI) is developing and testing the concept of an independent Peer Review Center of Excellence to review and evaluate toxicity values and assessments on chemicals of interest at Superfund hazardous waste sites.

The model peer review center will organize and convene panels of nationally recognized experts to perform the reviews, and the results will be publicly available. The peer review process is intended to be open and transparent, balanced, and objective, striving for the highest possible scientific credibility and involving all stakeholders.

Toxicity assessment documents may be submitted for peer review by government agencies, industry, academia, public interest groups, or other interested parties. Chemicals must be of interest to multiple organizations (as producers, users, potentially responsible parties, etc.) and to the public. Peer reviews will be funded by the sponsors who request the reviews.

The RSI Peer Review Center of Excellence will conduct peer reviews of the scientific basis and rationale for proposed toxicity values and their associated toxicity assessments. Examples include RfDs, RfCs, benchmark doses, NOAELs/LOAELs, cancer slope factors, etc. It is not expected that complete risk assessments, which include an exposure assessment compo-

nent, would be peer reviewed by the RSI Center. Similarly, site-specific assessments are not within the scope of this project.

The RSI Peer Review Center will provide guidance to sponsors on the content and preferred format of submissions. The toxicity assessment documents must summarize the relevant data and the rationale for proposed toxicity values.

Peer reviews will be conducted in public meetings. Observers will be accommodated to the extent possible, and opportunity will be provided for brief statements and presentations on the scientific issues by observers.

The report of the peer review panel will represent the consensus of the panel. If there are significant issues on which the panel is not in agreement, provision will be made for presenting the range of views and the rationale for each. The report will identify the members of the expert panel and their affiliations. The conclusions of the expert panel will be made available to the public (for example, via the RSI Peer Review Center Web site).

This project is dedicated to developing and implementing procedures that will assure the integrity of both the science and the peer review process. Core funding for administration of the project is provided by a cooperative agreement between RSI and the U.S. Environmental Protection Agency Office of Solid Waste and Emergency Response.

For further information, please contact the RSI Peer Review Center of Excellence Project, peer_review@ilsi.org, or call Dr. Stephen Olin or Dr. Isabel Walls at 202-659-3306. Also, see the RSI Peer Review Center Web site at <http://www.ilsi.org>. ◇◇◇



Member News

Rao Kolluru and John Graham

The Journal News, a Gannett Newspaper from the New York, New Jersey, Connecticut Metro area interviewed Rao Kolluru (Metro Chapter President), John Graham (Harvard Center for Risk Analysis), and other SRA members. The article, titled "A Risky Business Faces New Scrutiny," appeared on the top front page of the Business section on 25 September 2000.

The timing of the article coincides with the heightened public interest in risks in connection with the Bridgestone/Firestone tire recall. SRA was identified as a leading society for risk analysis professionals. Several quotes from SRA members appeared on the meaning of risk and the ways of identifying and managing the different types of risk. All in all, the readers should have a better appreciation of public risks, even if they might feel a little more perplexed.

Richard Reiss

Sciences International, Inc., a health and environmental firm that specializes in human health and ecological risk assessment, is pleased to announce that Dr. Richard Reiss has joined its staff.

Reiss has broad experience as a consultant and researcher in environmental science disciplines such as air quality and chemical risk assessment. In recent years, he has managed numerous human health and ecological risk assessments for pesticides and industrial chemicals. His specialty has been the application and development of state-of-the-art mathematical models for making realistic exposure estimates for risk assessment. He also provides consulting services to trade associations and law firms on air toxics, urban air quality, and industrial hygiene. Reiss began his career conducting research related to

urban air quality. He was an investigator for several air pollution epidemiologic studies and was a coordinator for a major study investigating air pollution transport in the Northeast corridor. He has also conducted indoor air research and was one of the first researchers to identify a secondary pollutant from a heterogeneous reaction on an indoor surface. Prior to joining Sciences International, Inc., Reiss was a Quantitative Risk Assessment Expert with Jellinek, Schwartz, & Connolly, Inc., Arlington, Virginia. Dr. Reiss received his Doctor of Science in environmental science and engineering at Harvard University School of Public Health.

Richard J. Wenning

The Weinberg Group Inc. is pleased to announce the recent appointment of Richard J. Wenning as Practice Director for Environmental Science and Risk Management services in its San Francisco, California, office. In addition to expanding upon the firm's expertise in risk analysis of consumer health care and medical products, Wenning will focus on expanding the firm's consulting services in environmental forensics, management of contaminated sediments, and health and environmental risk analysis.

Wenning has over 15 years of human health and ecological risk assessment experience serving clients in the United States, Europe, and the Asia-Pacific region. Prior to joining the firm, Wenning served as senior health risk assessor at ChemRisk and Corporate Vice President at McLaren/Hart. He is a member of the Science Advisory Panel for several professional organizations and Associate Editor of the journal *Archives of Environmental Contamination & Toxicology* and the journal *Ecotoxicology & Environmental Safety*. He is Editor-in-Chief of the journal *Environmental Forensics*. ◇◇◇



Advertisements

Risk Analysis for Chemicals and Radionuclides: A Review of the State-of-the-Art

5-9 March 2001—Kiawah Island, South Carolina

www.racteam.com

Risk Assessment Corporation announces a NEW five-day course, "Risk Analysis for Chemicals and Radionuclides: A Review of the State-of-the-Art." Speakers include Michael Ryan, Ph.D., Editor, *Health Physics* Journal; Roger Clarke, Ph.D., Chairman, ICRP; Alvin Young, Ph.D., Director, Center for Risk Excellence; Mary Clark, Ph.D., Assistant Office Director for Science, Office of Radiation and Indoor Air, U.S. EPA; Michael Dourson, Ph.D., Director, Toxicology Excellence for Risk Assessment; Paul Liroy, Ph.D., Deputy Director, Environmental and Occupational Health Sciences Institute; Bud Ward, Executive Director, Environmental Health Center, National Safety Council; Robert Gilbert, Ph.D., Associate Professor, Civil Engineering, University of Texas; Steven Maheras, Ph.D., SAIC; Joseph Reinhart, Babst, Calland, Clements, Zomnir, PC; Steven Bartell, Ph.D., Cadmus Group; Lesley Hay Wilson, P.E. Sage Risk Solutions; John Till, Ph.D., Risk Assessment Corporation; Kathleen Meyer, Ph.D., Keystone Scientific; Arthur Rood, K-spar; Helen Grogan, Ph.D., Cascade Scientific.

Fees: Early \$1,195; Late \$1,495; Government \$1,295

Contact: Phoebe Boelter, CAPSLTD@MCS.COM, 312-372-1255, fax: 312-372-1427.

Director Science and Public Policy Program University of Oklahoma

The Science and Public Policy (S&PP) Program at the University of Oklahoma invites applications for the position of Director. This is a tenured position with a joint appointment in an appropriate department in the Colleges of Engineering, Geosciences, or Arts and Science. S&PP is an interdisciplinary research unit in the Sarkeys Energy Center that is concerned with energy, environmental, and technology policy issues. The Director is expected to foster the role of S&PP as a catalyst for interdisciplinary research at the University of Oklahoma. Preference will be given to candidates who can integrate their scholarly endeavors with ongoing University initiatives. The Director is expected to have a vigorous and extramurally funded research program and to develop and contribute to an instructional curriculum. In addition, the successful candidate will take the lead in representing the S&PP program to both internal and external constituencies. The rank of the position will be commensurate with accomplishment, but appointment at associate/full professor is anticipated. Candidates should have a demonstrated ability to organize and lead interdisciplinary research teams. Candidates must have an earned Doctorate or appropriate alternative experience, a record of funded research in energy, science, or technology policy, with an academic background in an appropriate field of natural science, social science, or engineering. Salary will be commensurate with qualifications. A letter of application, curriculum vitae, copies of representative publications, and names, addresses, telephone numbers, and e-mail addresses of three references should be sent to Prof. Robert Anex, S&PP Search Chair, 100 East Boyd St., Room 510, Norman, OK 73019-1006. Review of applications will begin 1 December 2000 and continue until the position is filled. The University of Oklahoma is an equal opportunity, Affirmative Action Employer. The University of Oklahoma is responsive to dual career couples.

RISK newsletter and SRA Web Site Advertising Policy

Employment openings, books, software, courses, and events may be advertised in the Society for Risk Analysis (SRA) RISK newsletter or on the SRA Web site at a cost of \$250 for up to 150 words. There is a charge of \$100 for each additional 50 words. Camera-ready ads are accepted at a cost of \$250 for a 3.25-inch-wide by 3-inch-high box. The height of a camera-ready ad may be increased beyond 3 inches at a cost of \$100 per inch.

Members of SRA may place, at no charge, an advertisement seeking employment for themselves as a benefit of SRA membership.

The RISK newsletter is published four times a year. Submit advertisements to the Managing Editor, with billing instructions, by 15 January for the First Quarter issue (mid-February), 15 April for the Second Quarter issue (mid-May), 15 July for the Third Quarter issue (mid-August), and 15 October for the Fourth Quarter issue (mid-November). Send to Mary Walchuk, Managing Editor, RISK newsletter, 115 Westwood Dr., Mankato, MN 56001; phone: 507-625-6142; fax: 507-625-1792; e-mail: mwalchuk@mctcnet.net.

Ads may be placed both in the RISK newsletter and on the Web site for \$375 for 150 words and \$100 for each additional 50 words.

For additional information see the Web site at www.sra.org/policy.htm#events. Ads placed on the Web site will usually appear several days after receipt.



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Paper or Electronic?

The Society for Risk Analysis (SRA) Council has been discussing whether the RISK newsletter should be converted to an electronic format, with members receiving an e-mail notice of when the latest issue will appear on the SRA Web site. The membership now has a choice: Paper or Electronic? Please let the Secretariat know if you would prefer to receive your newsletter only on the Internet (contact Brett Burk, BBurk@BurkInc.com) and your name will be removed from the snail mailing list. If you would like to continue receiving a paper copy of the newsletter, do nothing and your name will remain on the snail mailing list. For now, all members will receive a notice of when the latest issue is on the Internet.

Should we go to an electronic-only RISK newsletter? If you have an opinion on the subject, please contact Mary Walchuk, RISK newsletter Managing Editor, 115 Westwood Dr., Mankato, MN 56001; fax: 507-625-1792; e-mail: mwalchuk@mctcnet.net, and let us know what you think. ◇◇◇

Deadline for RISK newsletter Submissions

Information to be included in the **First Quarter 2001** SRA RISK newsletter, to be mailed mid-February, should be sent to Mary Walchuk, RISK newsletter Managing Editor (115 Westwood Dr., Mankato, MN 56001; phone: 507-625-6142; fax: 507-625-1792; e-mail: mwalchuk@mctcnet.net) no later than **5 January**.

Society for Risk Analysis Web Site
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