

**Invitation for Comments on “Short List”
Candidates to Supplement the SAB Ecological Processes and Effects Committee for a
Consultation on the Regional Vulnerability Assessment Integration Tool and Underlying
Methods for Multi-Scale Decision Making
EPA Science Advisory Board**

The EPA Science Advisory Board Staff Office announced in a *Federal Register* Notice (Volume 69, Number 146; Pages 45706-45707) that the SAB will provide a consultation to EPA’s Office of Research and Development on the Regional Vulnerability Assessment (ReVA) integration tool and underlying methods for multi-scale decision making. The consultation will be performed by members of the SAB Ecological Processes and Effects Committee (EPEC). To augment the expertise of the SAB EPEC, the SAB Staff Office sought public nominations of individuals with expertise in: decision science, landscape ecology, land use change, use of geographic information system technology to analyze environmental stressors and effects, ecological risk assessment, and environmental statistics. Biographical sketches of current EPEC members are available on the SAB website (http://www.epa.gov/sab/pdf/epec_bios_for_web.pdf). Background information on the project and details on the nomination process appeared in the cited notice. The notice is available on the SAB Website at www.epa.gov/sab/.

The SAB Staff Office has received twelve nominations of individuals in response to the request. Based on qualifications, interest, and availability of the nominees, the SAB Staff Office identified the “Short List” of nominees. Brief biographical sketches of candidates on the “Short List” are listed below for comment. We welcome information, analysis or documentation for the Staff Office to consider in evaluating the “Short List” candidates.

The SAB Staff Office Director, in consultation with SAB leadership, as appropriate, makes the final decision about who will serve on the panel in the “Panel Selection” phase of this process. In that phase, the SAB Staff completes its review of information regarding conflict of interest, possible appearance of impartiality, and appropriate balance and breadth of expertise needed to address the charge. Staff reviews all information provided by candidates, along with any information that the public may provide in response to the posting of information about the prospective panel on the SAB Web site during the “Short List” phase and information gathered by SAB Staff independently on the background of each candidate.

Please provide any comments you may have with respect to the “Short List” candidates, no later than September 25, 2004. Please make your comments to the attention of Dr. Thomas Armitage, Designated Federal Officer. Emailing comments (armitage.thomas@epa.gov) is the preferred mode of receipt.

Regional Vulnerability Assessment Advisory Panel Nominee Short List

Peter August

Dr. Peter August is Professor of Natural Resources in the Department of Natural Resources Science at the University of Rhode Island and Director of the URI Coastal Institute. Dr. August received his B.S. degree (Biology) from the University of San Diego in 1974, his M.S. degree (Biology) from Texas Tech University in 1976, and his Ph.D. degree (Biology) from Boston University in 1981. His dissertation topic was community ecology of mammals in tropical forests of Venezuela. Dr. August came to URI in 1981 as an Assistant Professor of Zoology. In the Zoology Department he taught courses and seminars in Human Physiology, Vertebrate Zoology and Behavioral Ecology. In 1985, he moved to the Department of Natural Resources Science at URI to begin development of a Geographic Information System (GIS) database in a cooperative project involving the University and the Rhode Island Department of Environmental Management. He established the Environmental Data Center (EDC) in the Department of Natural Resources Science; the EDC serves as the Center of Technical Excellence in Rhode Island for GIS information processing and data distribution. Since 1985, the EDC, in cooperation with a number of state and federal agencies, has developed an extremely detailed and thorough GIS data library covering almost all aspects of Rhode Island's natural resources. The lab has attracted over \$5 million in grant funds in the last 15 years and has participated in cooperative research projects with the EPA, NOAA, USDA-NRCS, USFWS, NPS, and the USGS. The National Park Service's Field Technical Support Center is located at the EDC and provides GIS technical support to all the National Parks in the northeast United States. As Director of the Coastal Institute, Dr. August is responsible for developing programs and activities that assist in the creation of solutions to environmental problems in coastal ecosystems. Dr. August's research interests are mammalogy, landscape ecology, conservation biology, and GIS. He teaches graduate and undergraduate courses in environmental applications of GIS and various courses in applied ecology. He has published over 50 papers in journals, book chapters, and conference proceedings. Current projects include developing protocols to identify critical lands for conservation, biodiversity mapping, and developing Internet-based spatial data distribution systems. He has served on a number of standing committees for the American Society of Mammalogists, is the Chairman of the United States Chapter of the International Association of Landscape Ecologists, and serves on the Board of Directors for The Nature Conservancy Rhode Island, the Rhode Island Natural History Survey, and the Richmond RI Land Trust.

Igor Linkov

Dr. Igor Linkov is a Senior Scientist with Cambridge Environmental Inc. in Cambridge, MA, and an Adjunct Professor of Engineering and Public Policy at Carnegie Mellon University in Pittsburgh, PA. Prior to joining Cambridge Environmental, Dr. Linkov was a Senior Risk Assessor and Team Leader at ICF Consulting and Arthur D. Little, Inc., where he conducted environmental risk assessments in support of government and commercial clients. Dr. Linkov has a BS and MSc in Physics and Mathematics (Polytechnic Institute, Russia) and a Ph.D. in Environmental, Occupational and Radiation Health (University of Pittsburgh). He completed his postdoctoral training in Biostatistics, Toxicology and Risk Assessment at Harvard University. He has performed state-of-the-art ecological risk assessments, environmental decision making analyses, and spatially-explicit environmental threat investigations both in the United States and abroad. Dr. Linkov's current interests include bringing together tools and methodologies developed in the fields of operations research and risk assessment to address emerging threats. For the US Army, EPA, Navy and NOAA, he organized a workshop that developed frameworks for utilizing multi-criteria decision analysis methods and tools for sediment management. Results of this work are being widely used within the Army Corps of Engineers. He has contributed in developing methods for linking Habitat Suitability Index (HSI) models to modify exposure estimates in ecological risk assessments, which is currently being balloted to become an ASTM Standard. In addition, Dr. Linkov has developed his innovative methods into user-friendly software tools. For example, he is at present implementing a generic GIS module that will add capacity for analysis and visualization of spatially distributed data for the Army Risk Assessment Modeling System (ARAMS). For the American Chemistry Council (ACC) and US Army, he is developing the Risk-Trace model for spatially explicit ecological risk assessment. He is also developing the Questions and Decision (QnD) model which will utilize multi-criteria decision analysis methods and tools for environmental management by the US Army Corps of Engineers. Many of these projects and tools draw upon advanced statistical methods, including Bayesian analysis, probabilistic modeling, and geostatistical modeling. Dr. Linkov's research in the area of emergency response and homeland security has been supported by the North Atlantic Treaty Organization as well as the US Department of Defense. For NATO, he organized an international workshop on the Role of Risk Assessment in Addressing Environmental Security Needs. He is currently organizing a workshop on Environmental Security in Harbors and Coastal Areas, supported by NATO and by the US Army Corps of Engineers. As a Member of the Organizing Committee for the 2003 and 2004 annual meetings of the Society for Risk Analysis (SRA), Dr. Linkov was responsible for the ecological risk assessment and homeland security tracks. He has published widely on environmental policy, environmental modeling, and risk analysis, including six books and over 70 peer-reviewed papers and book chapters. Dr. Linkov serves as a Scientific Advisor to the Toxic Use Reduction Institute, a position that requires nomination by the Governor of Massachusetts. Dr. Linkov is President for the Society for Risk Analysis-New England. Dr. Linkov is President for the Society for Risk Analysis-New England. He is also Past Chair of the SRA Ecological Risk Assessment Specialty Group and participates in several SRA and SETAC Committees. Dr. Linkov has served on many review and advisory panels for the US and international agencies. Over the last two years, Dr. Linkov's research has been supported by the US Army, the Army Corps of Engineers, EPA, DOT, DOE, NOAA, NATO, US Chamber of Commerce, American Chemistry Council, Dow Chemical, and various private clients.

Orie Loucks

Dr. Orie Loucks is president of ICValue Inc, an investment research firm using regional corporate performance measures. He recently left the position of Ohio Eminent Scholar in Applied Ecosystem Studies and Professor of Zoology at Miami University, Oxford, Ohio. His training included degrees in forestry from the University of Toronto (1953 and 1955), and a Ph.D. in botany from the University of Wisconsin in 1960. He began his career with the Department of Forestry in Canada (1955-1962) and joined the Department of Botany, University of Wisconsin in 1962, teaching advanced courses in ecology. From 1969 to 1973 he headed a four-college watershed study of the Lake Wingra basin, as part of the U.S. contribution to the International Biological Program. From 1976 to 1978 he served as Director of the Center of Biotic Systems, Institute for Environmental Studies, University of Wisconsin, as well as Professor of Botany. He also headed a \$3 million US-EPA interdisciplinary study of environmental impacts from a large coal-fired generating station on the Wisconsin River in central Wisconsin. In 1978 he joined The Institute of Ecology (TIE) in Indianapolis as Science Director and headed a series of studies concerning the regional effects of air pollutants and acidic deposition on midwest ecosystems. In 1983 Dr. Loucks became Director of the Holcomb Research Institute at Butler University in Indianapolis. From 1986 to 1991 he headed a major inter-institutional study of pollutant effects on oak-hickory forests and soils of the Ohio Valley region. After joining Miami University in 1989, Dr. Loucks chaired a faculty study group linking the business school with the science departments, seeking a common understanding of sustainable development for undergraduate teaching and interdisciplinary research. This initiative became the Center for Sustainable Systems Studies through which Dr. Loucks and colleagues have held grants on Environmental Technology and Business (Cleveland Foundation), and Biodiversity values in a place-based Ecological Risk Assessment (US-EPA). In the mid-1980's Dr. Loucks was a member of the National Academy of Sciences Board on Water Science and Technology, and was U.S. Co-chair of the joint NRC-NAS/Royal Society of Canada study reviewing the 1978 Great Lakes Water Quality Agreement. He was a member of the Science Advisory Board, International Joint Commission from 1991 to 1995. From 1995 to 1997 he chaired the U.S. Vegetation Classification Panel of the Ecological Society of America and was a member of the AAAS Annual Meeting Program Committee from 1995 to 2001. Dr. Loucks' public service and conservation interests are reflected in his 1960's and 70's role on the Board of Trustees, Wisconsin Chapter of The Nature Conservancy, as a member of the national Board of Governors of The Nature Conservancy from 1984 to 1994, and as a recent member of the Ohio Chapter Board of Trustees. He also served on the Cincinnati Museum's Edge of Appalachia Advisory Committee and the Three Valleys Conservation Trust. He was honored in 1987 as a Fellow of the AAAS, in 1994 with the Distinguished Service Award of the American Institute of Biological Science, and in 2001 was the recipient of the National Wildlife Federation's Conservation Achievement Award in Science.

Ganapati Patil

Dr. Ganapati Patil is Distinguished Professor of Mathematical and Environmental Statistics in the Department of Statistics at the Pennsylvania State University, and is a former Visiting Professor of Biostatistics at Harvard University in the Harvard School of Public Health. He has a Ph.D. in Mathematics, D.Sc. in Statistics, one Honorary Degree in Biological Sciences, and another in Letters. He is a Fellow of American Statistical Association, Fellow of American Association of Advancement of Science, Fellow of Institute of Mathematical Statistics, Elected Member of the International Statistical Institute, Founder Fellow of National Institute of Ecology and Society for Medical Statistics in India. He has been a founder of Statistical Ecology Section of Ecological Society of America, a founder of Statistics and Environment Section of American Statistical Association, and a founder of the International Society for Risk Analysis. He is founding editor-in-chief of the international journal, *Environmental and Ecological Statistics* and founding director of the Penn State Center for Statistical Ecology and Environmental Statistics. He has published thirty volumes and three hundred research papers. He has received several distinguished awards which include: Distinguished Statistical Ecologist Award of the International Association for Ecology, Distinguished Achievement Medal for Statistics and the Environment of the American Statistical Association, Best Paper Award of the American Fisheries Society, and lately, the Best Paper Award of the American Water Resources Association. Currently, Dr. Patil is principal investigator of a five year NSF grant for surveillance geoinformatics for digital government in the 21st Century. The project has a dual disciplinary and cross-disciplinary thrust.

Mark Ridgley

Dr. Mark Ridgley is a resource systems analyst and Professor and Chair of the Department of Geography at the University of Hawaii at Manoa. With an academic background in environmental design (B.Env. Dn, NCSU), hydrology, operations research, and geography (MS and PhD, Penn State), Dr Ridgley focusses on the application of decision science to resource management and human-environment systems in general. A specialist in multicriterion decision modelling (MCDM), he has over 20 years' experience in providing multicriterion decision analysis and support to a wide range of resource and related societal issues, including water resource management, land-use planning, urban water and sanitation services, forestry, coral reef management, risk assessment, the design of both marine and terrestrial protected areas, equitable burden sharing, and bioethics. With a colleague in oceanography, he pioneered the application of fuzzy rule-based modelling to coral reef ecosystems. At UH-M he teaches upper-level undergraduate and graduate courses in optimization modelling, resource management, and risk assessment, and graduate courses or seminars in human-environment systems analysis, multiobjective decision analysis, and concepts and theories in geography.

David Stoms

Dr. David Stoms (BA in Architecture, Rice University, MA and Ph.D. in Geography, University of California Santa Barbara) is an Associate Research Scientist in the Bren School of Environmental Science and Management at the University of California, Santa Barbara. In his current position, he manages the Biogeography Lab, which conducts research integrating landscape ecology, conservation planning, and geospatial techniques. His research interests center on the application of conservation science to GIS-based conservation planning and assessment methods, with funding support from the U. S. Forest Service, USGS, the Environmental Protection Agency, the California Resources Agency, the California Energy Commission, the University of California, the IBM Environmental Research Program, the World Bank, The Nature Conservancy, and NatureServe. These projects have produced new methodological procedures or working GIS-based tools, such as the TAMARIN model for conservation planning in the Atlantic Rainforest of Brazil. He was awarded second place from ESRI in 1993 for the best scientific journal paper in GIS for a sensitivity analysis of the effects of spatial data uncertainty in habitat suitability modeling. Dr. Stoms is a member of the International Association for Landscape Ecology, the Society for Conservation Biology, and the Society for Conservation GIS. He has reviewed for more than a dozen journals in ecology, conservation biology, and GIS/remote sensing. He has participated in several working groups related to conservation planning methods and tools at the National Center for Ecological Analysis and Synthesis. Dr. Stoms has served on advisory panels for conservation planning programs in Florida and California. In 2003, the Autonomous Government of Catalonia, Spain selected him as a University of California Visiting Scholar. Prior to his academic career, Dr. Stoms served for nine years on a multidisciplinary planning team with the U. S. Forest Service at Lake Tahoe.