

Virginia H. Dale

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Degrees:

B.A. in Mathematics, University of Tennessee, Knoxville, 1974 (with honors)
M.S. in Mathematics with a minor in Ecology, University of Tennessee, Knoxville, 1975
Ph.D. in Mathematical Ecology (a Special Individual Ph.D. Program), University of Washington,
Seattle, 1980

Research and Teaching Experience:

Environmental Sciences Division, Oak Ridge National Laboratory, 1984-present (Research Scientist
1984-1994, Associate Director 1994-1996, Senior Scientist 1996-2002, Corporate Fellow 2003 to
present)
Department of Forestry, Wildlife and Fisheries at the University of Tennessee, Knoxville, Adjunct
Professor, 2006-present
Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, Adjunct
Professor, 1993-present
Instructor, Department of Biology, University of Puget Sound, 1982-1983
Assistant Professor, Departments of Biology and of Mathematics, Pacific Lutheran
University, 1981-1982 (as a sabbatical replacement)
College of Forest Resources, University of Washington, Research Associate, 1981-1983
Forest Research Laboratory, Oregon State University, Research Associate, 1981
Department of Botany, University of Washington, Research Associate, 1980

Management:

Director, Center for BioEnergy Sustainability, Oak Ridge National Laboratory, 2009-present
Group Leader, Landscape Ecology and Regional Analysis Group, Environmental Sciences Division,
Oak Ridge National Laboratory (2005-present)
National Center for Environmental Decision Making Research, Toolkit Team co-leader (1995-1997)
Acting Division Director, Environmental Sciences Division, Oak Ridge National Laboratory (1996)
Associate Director, Environmental Sciences Division, Oak Ridge National Laboratory (1994-1996)
Group Leader, Theoretical Ecology Group in the Ecosystem Studies Section of the Environmental
Sciences Division, Oak Ridge National Laboratory (1992-1994)
Task leader for ORNL Director's R&D fund on land-use change (1990-92)
Program manager for Department of Energy land-use research (1989-90)

Awards:

International Technical Communications Competition of the Society of Technical Communication:

- for a book - Award of Merit 2007
- for a scholarly/professional journal - Award of Merit 2003
- for a Scholarly/Professional Article - Award of Distinguished 1992
- for a Scholarly/Professional Article - Award of Excellence 1991

¹ The highest rank of research scientists at Oak Ridge National Laboratory (obtained by <.01%)

The 2006 Distinguished Scientist for Oak Ridge National Laboratory.

YWCA of Knoxville, Tn Tribute to Women, Finalist in Science/Technology Category, 2006

2004 Distinguished Alumnae, Harpeth Hall School, Nashville, Tn.

UT-Battelle Significant Event Award for contributions to the U.S. National Assessment of Climate Variability and Change, 2000

Technical Publication Award from the Society of Technical Communication:

- Willamette Valley Chapter: Award of Excellence for a Book, 2007
- South Carolina Chapter: Award of Distinguished for a scholarly/professional journal 2003.
- Middle Tennessee Chapter: Award of Merit for a Brochure, 2003.
- East Tennessee Chapter: Award of Merit for a Book, 2000; Award of Excellence for a Book, 1995; for a Scholarly/Professional Article - Award of Distinguished 2001 and 1991, Award of Merit 1999; Award of Distinguished for a Trade/News Article, 1992.

Top Citizen of Oak Ridge, 1999

YWCA of Knoxville, Tn Tribute to Women, Finalist in Science/Technology Category, 1999

YWCA of Oak Ridge, Tn Night of Tribute Award for Health, Science and Technology, 1999

Lockheed Martin Energy Research Corporation Significant Event Award, 1999

Research Accomplishment Award from Lockheed Martin Energy Research, 1999

Hammer Award from Vice President Al Gore for work on the Southern Appalachian Assessment that was a "contribution to building a government that works better and costs less," 1997

Distinguished and Sustained Scientific Achievement Award, Association for Women in Science, East Tennessee Chapter, 1994

Martin Marietta Technical Achievement Award, 1991

Martin Marietta Performance Improvement Process Award, 1989

Puget Sound Mycological Society Student Fellowship, 1979

Northwest Science Association Student Award, 1979

Ford Fellowship, 1976 and 1977

Professional Activities:

National Academy committees:

- Committee on Economic and Environmental Impacts of Increasing Biofuels Production, 2010 to 2011
- U.S. National Committee on the Scientific Committee on Problems of the Environment (SCOPE), 2000-2009, Chair, 2005-2009
- Ecological Impacts of Road Density, 2001-2005
- Ecosystems Panel, 1997-2000
- Review team for Brazilian Institutions, 1992

Environmental Protection Agency Scientific Advisory Board:

- Charter Board, 2006 to 2008
- Chair of Hypoxia Review Panel, 2006-2007
- Ecological Processes and Effects Committee, 1992-1997, 2000-2006 (Chair 2002-2006)
- Research Strategies Advisory Committee, 1995-1997
- Executive Committee, 2000-2007
- Chair of review of EPA's report on the Environment, 2004

National Environmental Observation Network (NEON)

- Member of NEON Science, Technology and Education Advisory Committee, 2008 to present
- Workshop on land use and habitat alteration (Co-Chair), August 2004

National Advisory Council for Harpeth Hall School, Nashville, TN 2001-2006

Science Advisory Committee of the US Department of Interior Grand Canyon Monitoring and Research Center, 2000-2008

The Nature Conservancy Scientific Review Committee, 2000-2001

Global Change Subcommittee of DOE's Biological and Environmental Research Advisory Committee, 2001

Advisory Committee for workshop on "Land Use in Rural America" 2000

National Science Foundation

- Review team member for the
 - National Center for Ecological Analysis and Synthesis 2000
 - University of Colorado Long Term Ecological Research at Niwot Ridge, Colorado, July 10-12, 1989
- Ecosystems Science Panel Member, 1997-1999
- Human Dimensions of Global Change Panel Member, 1992-1994
- Advisory Committee on Scientific and Technological Planning on Long Term Ecological Research, Washington, D.C., January 25-26, 1988

U.S. National Assessment of Climate Change, Forest Sector, 1999-2001

Sustainable Biosphere Initiative, Chair of Advisory Committee for the Land Use Initiative, 1999-2000

USDA Committee of Scientists, 1997-1999

SERDP (Strategic Environmental Research and Development Program) Ecosystems Management Project of Department of Defense, committee member, 1997-1998.

Technical Advisor Group for "Assessment of Military Training and Testing Impacts on Natural and Cultural Resources" USA Construction Engineering Research Laboratories, 1996.

Southern Appalachian Man and the Biosphere: Executive Committee, Policy Team for Southern Appalachian Assessment 1994-1995

Science Advisor, The Sand County Foundation, 1992-1994

University of Amazonas and University of Tennessee exchange faculty, 1993

Listings:

- Who's Who of American Men and Women in Science
- Who's Who of American Women in Science
- Who's Who in Technology
- Dictionary of International Biography
- International Woman of the Year
- Outstanding People of the 20th Century
- Who's Who in the 21st Century

American Women in Science East Tennessee Chapter Education Committee, 1991

Service to Professional Societies:

U.S. Regional Association of the International Association for Landscape Ecology:

- Chair 2000-2002
- Nominations Committee: 2004.

Ecological Society of America:

- Member-at-Large of Governing Board, 1995-1997
- Nominating Committee 1997
- Finance Committee, 1995-1998
- Membership Committee 1995-1998
- Land Use Committee, chair, 1996-1999
- Program Committee 1998-1999
- Board of Professional Certification 1999-2001, Chair 1999-2000

- Certified Senior Ecologist 1996-present
- Rapid Response Team 2005-present.

Sigma Xi, Oak Ridge Chapter:

- President, 1996-1997
- President-elect, 1995-1996
- Treasurer, 1993-1995

Society Memberships:

American Institute for Biological Sciences
American Women in Science
Conservation Biology
Ecological Society of America
International Association for Landscape Ecology
Sigma Xi

Editorial Services

Editor-in-Chief, *Environmental Management*, 2001-present

Editorial Board:

- *Journal of Land Use Science*, 2005- present.
- *Ecological Indicators*, 2000-present
- *Ecological Economics*, 1999-present
- *Landscape Ecology*, 1998-2001
- *Ecosystems*, 1997-2001
- *Environmental Reviews*, National Research Council of Canada, 1992-1995

Ad Hoc Reviewer:

Proposals

Army Research Office
Department of Energy
Environmental Protection Agency
Maryland Department of Natural Resources
National Aeronautics and Space Administration
National Science Foundation (Ecology, Ecosystems, Geography, Hydrological Sciences, and Human Dimensions of Global Change, Decision Risk and Management Science)
The Nature Conservancy
National Institute for Global Environmental Change
USDA Forest Service

Journals

American Midland Naturalist	Ecological Economics
Biogeochemistry	Ecosystem Health
BioScience	Ecosystems
Canadian Journal of Botany	Ecotoxicology
Canadian Journal of Forest Research	Environmental Management
Climate Research	Forest Science
Conservation Biology	Global Biogeochemical Cycles
Conservation Ecology	Journal of Forest Ecology and Management
Ecology	Journal of Forest History
Ecological Applications	Journal of Sustainable Tourism

Journal of Transportation and Statistics	Photogrammetric Engineering and Remote Sensing
Journal of Vegetation Science	Plant Ecology
Landscape Ecology	Planning Practice and Research Journal
National Research Council	Soil Science Society of America Journal
National Geographic Research & Exploration	The Science of the Total Environment
Nature	Vegetatio

Research Sponsorship:

- Department of Energy Office of the Biomass Program- bioenergy sustainability; 2009 to present
 ORNL's Laboratory Director's Research Development, 2006-2009 (\$800,000) Scale-Dependent Metrics for Bioenergy: Land-Nutrient-Water Interactions under Future Energy Scenarios
 The Hewlett Foundation, 2006 (\$50,000) Effects on Climate Change on Forests of Tennessee
 ORNL's Seed Money, 2006 (\$27,989) Land-Use Dynamics and Infectious Diseases: A Systems Approach to Defining the Causal Mechanism of Outbreak and Spread of Eastern Equine Encephalomyelitis
 The Nature Conservancy, 2004-2005 (\$102,596) A Comparison of Current and Desired Future Conditions of the Forest Ecosystems in the Northern Cumberland Plateau Landscape.
 Strategic Environmental Research and Defense Program, 2002-2006 (\$320,000) SEMP Integration
 Strategic Environmental Research and Defense Program, 2002-2006 (\$1,700,000) "RSim: A Regional Simulation to Explore Impacts of Resource Use and Constraints (with The Nature Conservancy, University of Tennessee, Georgia Institute of Technology, and Aberdeen Proving Ground)
 U.S. Agency for International Development support for creating a projection of land use change for the Panama Canal Watershed, 2001-2002.
 U.S. Agency for International Development support for creating a projection of land use change for the Peten region of Guatemala, 2000.
 Strategic Environmental Research and Defense Program, 1999-2005 (\$2,400,000) "Indicators of Ecological Change" (with The Nature Conservancy of Georgia, Pennsylvania State University, and Fort Benning)
 U.S. Air Force, Arnold Air Force Base, "Landscape Ecology, Modeling, and Monitoring," \$130,000, 1999-2000.
 Department of Defense, Image assessment, \$600,000 (with Sam Houston State University), 1999-2000
 Department of Energy, National Assessment of Climate Change: Impacts on Forests (\$50,000) 1997-1999
 Strategic Environmental Research and Defense Program, 1996 (\$910,000) "Enhancement of Image Assessment Capabilities for Natural Resource Characterization" (with Sam Houston State University and USA Construction Engineering Research Laboratories)
 NSF/EPA Partnership for Environmental Research, 1995-1997 (\$140,000) "Innovations in Valuation of Ecosystems: A Forest Application" (with Vanderbilt Institute for Public Policy Studies)
 NSF, 1995-1999 (\$5,000,000) Center for Environmental Decision Making (with TVA and University of Tennessee through the Joint Institute for Energy and the Environment)
 Strategic Environmental Research and Defense Program, 1994-1998 (\$4,537,000) "Ecological Modeling for Military Land Use" (with Pacific Northwest Laboratories)
 EPA Environmental Monitoring and Assessment Program, 1994-1996 (\$806,832) "Relating Ecological Indicators to Societal Values" (with Vanderbilt Institute for Public Policy Studies)
 USDA Forest Service Global Change Program, 1993-96 (\$18,000) "Developing of Mechanistic Models of Regeneration and Stand Establishment and Scaling Up to Regional and National Levels" (with the North Central Forest Research Station)
 National Geographic Society, 1994-95 (\$11,050) "Fifteen Years of Plant Recovery on the Debris Avalanche at Mount St. Helens"

- Ecological Society of America's Sustainable Biosphere Initiative, 1994 (\$5000) "Relating Land Use Change and Climate Change"
- EPA, National Acidic Precipitation Assessment Program, 1993-94 (\$167,825) "Developing a Framework for Integrated Assessment"
- ORNL Seed Money, 1992 (\$14,000) "Novel Techniques for Correlating Forest Fragmentation with Biodiversity"
- Oak Ridge National Laboratory Director's R&D Fund, 1990-1992 (\$887,000) "Land Use and Global Environmental Problems: Integrating Approaches from the Social and Environmental Sciences"
- Department of Energy, Carbon Cycle Program, 1987-1990, 1993-94 "Causes of Global Climate Change"
- National Geographic Society, 1989 (\$5,750) "Plant Recovery on the Debris Avalanche at Mount St. Helens"
- National Science Foundation, 1988 (\$35,000) "Predicting across Scales: Theory Development and Testing"
- Oak Ridge National Laboratory Seed Money, 1986 (\$67,000) "Biotic Control of Landscape Pattern: Interactions of Scale Dependent Ecosystem Processes "
- EPA, National Acidic Precipitation Assessment Program, 1984-1986 "Modeling Impacts of Acidic Precipitation to Forests"
- EARTHWATCH (Center for Field Studies), 1982-1983 (\$11,179) "The Recovery of Mount St. Helens"
- Research Corporation, 1982 "Disturbances created by the Mount St. Helens Eruption"
- National Science Foundation (co-investigator), 1980-82 "Effects on the Vegetation of the Mount St. Helens Eruption"
- Sigma Xi Grant-in-Aid of Research, 1978 (\$300) "Pollination Ecology on Mount Rainier"

Field Experience:

- Grand Canyon, Arizona 2002-2008
- Panama Canal Watershed, Panama, 2001
- Maya Biosphere Reserve, Guatemala, 2000
- Fort Benning, Georgia, 1999-2006
- Arnold Air Force Base, Tennessee, 1999-2000
- Fort McCoy, Wisconsin, 1998
- Fort Knox, Kentucky, 1996
- Oak Ridge Reservation, Tennessee, 1992-1996
- Amazonas, Brazil, 1992-1993
- Rondônia, Brazil, 1991-1992
- Mount St. Helens, Washington, 1980-present
- Walker Branch Watershed, Tennessee, 1988
- Cascade Head, Oregon and Wind River, Washington, 1985
- Mount Rainier, Washington, 1977-1980
- Deer Park, Olympic Peninsula, Washington, 1978
- Wenatchee Mountains and North Cascades, Washington, 1978-1980
- Mima Mounds, Washington, 1979

Workshops and Symposia Organized:

- Symposium on "Changing Patterns of Landscapes" for Ecology Society of America Annual Meeting, Ohio State University, August 10-14, 1987
- Workshop on Effects of Land Use on Atmospheric CO₂, Oak Ridge, Tennessee, May 18-20, 1987

- Workshop sponsored by the National Science Foundation and the Office of Health and Environmental Research of the Department of Energy on "Predicting Across Scales: Theory Development and Testing." Oak Ridge, Tenn., November 8-12, 1988
- Workshop sponsored by the Department of Energy on "Using Remote Sensing to Estimate CO₂ Flux from Land Use Changes." Washington, D.C., February 22-24, 1989
- Symposium on "The Effect of Land Use Change on Atmospheric CO₂ Concentration" at the Annual Ecological Society of America Meeting in Toronto, Canada, August 7, 1989
- Workshop on "Natural Resource Economics" sponsored by U.S. Agency for International Development and Partners in Education for 10 visiting Brazilian scientists, September 12-14, 1991, Oak Ridge, Tennessee.
- Workshop on "Developing the Framework for the NAPAP Assessment" sponsored by the Environmental Protection Agency, Nov. 8-10, 1993, Oak Ridge, Tennessee.
- Workshop on "Integrated Assessment: Characterizing Key Policy Issues" sponsored by the Department of Energy, June 28-29, 1994, Washington, D.C.
- Workshop on "Comparing Large, Infrequent Disturbances" sponsored by the National Center for Ecological Analysis and Synthesis, May 20-22, 1996, Santa Barbara, Ca.
- Workshop on "Ecological Aspects of Land-Use Change" sponsored by EPA and the Sustainable Biosphere Initiative, September 22-24, 1996, Townsend, Tennessee.
- Workshop on "Tools for Environmental Decision-Making Research" sponsored by the NSF National Center for Environmental Decision-Making Research, October 28-30, 1996, Knoxville, Tennessee.
- Discussion on "Ecological Principles of Land-Use Dynamics in the United States," Ecological Society of America Annual meeting, Albuquerque, New Mexico, August 12, 1997.
- Workshop on "Land Use Change," Oak Ridge, Tennessee, January, 1998 (sponsored by the Sustainable Biosphere Initiative and NASA).
- Session on "Use and Communication of Science in Decision Making." at the National Conference on Decision Making of the National Center for Environmental Decision Making Research, Knoxville, Tennessee, May 4-6, 1998.
- Session on "Tools and Methods for Ecosystem Management Decisions" at the National Conference on Decision Making of the National Center for Environmental Decision Making Research, Knoxville, Tennessee, May 4-6, 1998.
- Symposium on "Ecological principles of land management and their implications" at the Annual Ecological Society of America Meeting in Baltimore, Maryland, August 6-10, 1998.
- Co-Chair of Workshop on Community Workshop on Integrated Assessment, July 8-10, Washington, D.C., American Association of Geographers
- Strategic Environmental Development and Research Program (SERDP) symposium on Ecosystem Management, Washington, D.C., December 1998
- American Association of Geographers, Honolulu, Hawaii, March 1999.
- National Conference on Environmental Decision Making, Knoxville, Tn., April 1999.
- Workshop on "Effective Use of Ecological Modeling in Management" Oak Ridge, Tn, October 23-26, 2000.
- Symposium on "Ecosystem Management for Threatened and Endangered Species" as part of the SERDP Symposium, Washington, DC, Dec. 5, 2002.
- Symposium on Ecological Recovery at Mount St. Helens, August 2004 meeting of the Ecological Society of America, Portland, OR.
- Workshop on land use for the National Environmental Observation Network, Baltimore, MD, August 24-25, 2004.
- Symposium and workshop sponsored by the Ecological Society of America on "Ecological Dimensions of Biofuels," Washington DC March 12-15, 2008.
- Land-Use Change and Bioenergy Workshop, Vonore, TN, May 11-14, 2009.

Workshop on Sustainable Watersheds, February 2010

Workshop on Sustainability Implications of the Billion Ton Study, September 2011

Organized and Edited Journal Special Issues:

Special issue of *Landscape Ecology* that resulted from the November 1988 workshop on "Predicting Across Scales"

Special issue of the *Canadian Journal of Forest Research* on estimating land-use change in south and southeast Asia, 1990

Special issue of *Ecosystems* on "Large, infrequent disturbances," Nov/Dec 1998 that resulted from a workshop at the National Center for Ecological Analysis and Synthesis.

Issues Forum in *Ecological Applications* on "Perspectives on Land Use," 2000.

Special issue of *Ecosystems* on "Biodiversity Aspects on Climate Change in Forests," May 2001.

Special issue of *the Science of the Total Environment* on "Climate Change, Forests, and Disturbances," 2000, Vol. 262, Number 3.

Students: (Dale was on Graduate School Committee)

Robert Frohn, M.S., Ecology at the University of Miami in Ohio (1990-91)

Ph.D. Geography at the University of California in Santa Barbara (1992-95)

Holly Offerman, Ecology, DOE's Science and Engineering Research Semester and Master's program in Geography at the University of Maryland (1993-95)

Brad McRae, DOE Climate Change Fellow, masters in Wildlife Ecology at the University of Wisconsin, Madison, Wi. (1993-95)

Brett Hazen, M.S., Computer Science at the University of Tennessee (1995)

Jill Caviglia, Ph.D., Economics, University of Tennessee (1995-1998)

Michael Kane, Ph.D., Ecology and Evolutionary Biology, University of Tennessee (1996-2003)

Aaron Peacock, Ph.D., School of Agriculture, University of Tennessee (2003-2006)

Jonah Fogel, Ph.D., Department of Forestry, Wildlife and Fisheries, University of Tennessee (2004-2006)

Community Involvement:

Boy Scouts of America, assistant leader, 2001-2008

Advocates for the Oak Ridge Reservation, 1998-present, At-Large Board Member, Chair: 2006 to present

Citizens for Quality Growth, Chair of Steering Committee, 1989-1993

Girl Scouts of America, volunteer, 1988-1997

American Youth Soccer Organization, coach 1987-1989, 1996-99

Oak Ridge Regional Task Force, Member 1987-1988

Environmental Quality Advisory Board, City of Oak Ridge, Member, 1985-1988, Chair 1986-1988

State Conservation Chairperson, Washington Native Plant Society, 1982-1983

Instructor, SPECTRUM (continuing education at the University of Washington), 1980-1982

Instructor, Women and Mathematics, A Secondary School Lecture Program sponsored by the Mathematical Association of America, 1980-1983

Instructor, The Arboretum Society, University of Washington, 1980

Publications (7 books and >189 articles and reports): (V. Dale was formerly V. Adams)

Books

Dale, V.H. (editor). 1994. *Effects of Land Use Change on Atmospheric CO₂ Concentrations: Southeast Asia as a Case Study*. New York: Springer-Verlag.

Dale, V.H. and English, M.R. (editors). 1999. *Tools to Aid Environmental Decision Making*. New York: Springer-Verlag.

Dale, V.H. and Haeuber, R.A. (editors). 2001. *Applying Ecological Principles to Land Management*. New York: Springer-Verlag.

Forman, RT.,D. Sperling, J. Bissonette, A. Clevenger, C. Cutshall, V.H. Dale, L. Fahrig, R. France, C. Goldman, K. Heanue, J. Jones, F. Swanson, T. Turrentine, and T. Winter. 2003. *Road Ecology: Science and Solutions*. Island Press.

Dale, V.H. (editor) 2003. *Ecological Modeling for Resource Management*. New York: Springer-Verlag.

Dale, V.H., Swanson, F.J., and Crisafulli, C.M. (editors). 2005. *Ecology Response to the 1980 Eruption of Mount St. Helens*. New York: Springer.

Dale, V.H., C. Kling, J.L. Meyer, J. Sanders, H. Stallworth, T. Armitage, D. Wangsness, T.S. Bianchi, A. Blumberg, W. Boynton, D.J. Conley, W. Crumpton, M.B. David, D. Gilbert, R.W. Howarth, R. Lowrance, K. Mankin, J. Opaluch, H. Paerl, K. Reckhow, A.N. Sharpley, T.W. Simpson, C. Snyder, and D. Wright. 2010. *Hypoxia in the Northern Gulf of Mexico*. New York: Springer.

Land-use Change

Turner, M.G., R.H. Gardner, V.H. Dale, and R.V. O'Neill. 1988. Landscape pattern and spread of disturbance. Pp. 373-382 In M. Ruzycka, T. Hrnčiarova, and L. Miklos, eds. Proc. VIIIth International Symposium on Problems of Landscape Ecological Research. Vol. 1. Institute of Experimental Biology and Ecology, CBES SAS, Bratislava, CSSR.

Turner, M.G., R.H. Gardner, V.H. Dale, and R.V. O'Neill. 1989. Predicting the spread of disturbance across a heterogeneous landscape. *Oikos* 55:121-129.

Dale, V.H., L.K. Mann, R.J. Olson, D.W. Johnson, and K.C. Dearstone. 1990. The influence of past land use on the Walker Branch forest. *Landscape Ecology* 4:211-224.

Dale, V.H. (ed.) 1990. Report of a workshop on using remote sensing to estimate land use change. ORNL/TM-11502, Oak Ridge, Tennessee.

Dale, V.H. 1990. Strategy for monitoring the effects of land use change on atmospheric CO₂ concentrations. In Proceedings of "Global Natural Resource Monitoring and Assessments: Preparing for the 21st Century," Venice, Italy, September 25-30, 1989. American Society for Photogrammetry and Remote Sensing, Bethesda, MD. Vol I: 422-431.

Frohn, R., V.H. Dale, and B. Jimenez. 1990. The effects of colonization on deforestation in Rondônia, Brazil. ORNL/TM 11470, Oak Ridge, Tennessee.

Pedlowski, M.A. and Dale, V.H. 1992. Land Use Practices in Ouro Preto Do Oeste, Rondônia, Brazil. ORNL TM 12062, Oak Ridge, Tennessee.

Dale, V.H., R.V. O'Neill, F. Southworth, and F. Loureiro. 1992. Analyzing simulated patterns of land-use change. Proceedings of the ASPRS/ACSM/RT '92 Convention on "Monitoring and Mapping Global Change" Washington, D.C., August 3-6, 1992. Vol 5, pp. 284-293.

Dale, V.H., M.A. Pedlowski, R.V. O'Neill, and F. Southworth. 1992. Modeling socioeconomic and ecologic aspects of land use change: A case study of central Rondônia. Proceedings of the Second International Symposium on Environmental Studies of Tropical Rain Forests - FOREST'92. May 24-29, Rio de Janeiro, Brazil.

Dale, V.H., and Pedlowski, M.A. 1992. Farming the forests. *Forum for Applied Research and Public Policy* 7:20-21.

Dale, V.H., Houghton, R.A., Grainger, A., Lugo, A.E., and Brown, S. 1993. Emissions of greenhouse gases from tropical deforestation and subsequent uses of the land. Pp. 215-261 IN Sustainable Agriculture and the Environment in the Humid Tropics, Washington, D.C.: National Academy Press.

Dale, V.H., Southworth, F., O'Neill, R.V., Rosen, A. and Frohn, R. 1993. Simulating spatial patterns of land-use change in Rondonia, Brazil. Pp. 29-56 In R. H. Gardner (ed.) Some Mathematical Questions in Biology. Providence, R.I.: American Mathematical Society.

Dale, V.H., R.V. O'Neill, M.A. Pedlowski, and F. Southworth. 1993. Causes and effects of land-use change in central Rondônia, Brazil. *Photogrammetric Engineering & Remote Sensing* 59:997-1005.

Dale, V.H., Pedlowski, M., O'Neill, R. and Southworth, F. 1993. DELTA: Na busca de alternativas para a Amazônia. *Ciência Hoje*. 16:61-64.

Dale, V.H., O'Neill, R.V., Southworth, F. and Pedlowski, M.A. 1994. Modeling effects of land management in the Brazilian settlement of Rondônia. *Conservation Biology* 8:196-206.

Dale, V.H. 1994. Patterns of land-use change in south and southeast Asia and implications for global studies. Pp. 1-14 In V.H. Dale (ed.) Effects of Land Use Change on Atmospheric CO₂ Concentrations: Southeast Asia as a Case Study. New York: Springer-Verlag.

Dale, V.H., Brown, S., Flint, E.P., Hall, C.A.S., Iverson, L.R., and Uhlig, J. 1994. Estimating CO₂ flux from tropical forests. Pp. 365-374 In V.H. Dale (ed.) Effects of Land Use Change on Atmospheric CO₂ Concentrations: Southeast Asia as a Case Study. New York: Springer-Verlag.

Pickett, S., Burke, I., Dale, V.H., Gosz, J.R., Lee, R.G., Pacala, S.W., and Shacak, M. 1994. Integrated regional models of forested regions. Pp. 120-142 In P. Groffman and G. Likens (ed.) Integrated Regional Models. New York: Chapman and Hall.

Dale, V.H., Pearson, S.M., Offerman, H.L., and O'Neill, R.V. 1994. Relating patterns of land-use change to faunal biodiversity in the Central Amazon. *Conservation Biology* 8: 1027-1036.

Gardner, R.H., King, A.W. and Dale, V.H. 1994. Interactions between forest harvesting, landscape heterogeneity, and species persistence. Pages 65-75 In D.C. LeMaster and R.J. Sedjo, eds. Modeling Sustainable Forest Ecosystems. Proceedings of a 1992 workshop in Washington, D.C. Published by American Forests, Washington, D.C.

Dale, V.H., O'Neill, R.V., Southworth, F. and Pedlowski, M.A. 1994. Modeling effects of land management in the Brazilian settlement of Rondônia. Pages 242-252 In (D. Ehrenfeld, ed) Readings from Conservation Biology: The Landscape Perspective. The Society for Conservation Biology and Blackwell Science, Inc., Cambridge, Mass.

Dale, V.H., Offerman, H., Frohn, R. and Gardner, R. 1995. Landscape characterization and biodiversity research. In (T.J.B. Boyle and B. Boontawee, ed.) Measuring and Monitoring Biodiversity in Tropical and Temperate Forests. Center for International Forestry Research, Bogor, Indonesia.

O'Neill, R.V., Hunsaker, C.T., Jones, D., Klopatek, J.M., Dale, V.H., Turner, M.G., Gardner, R.H., and Graham, R. 1995. Sustainability at landscape and regional scales. Pages 137-144 In M. Munzinger and W. Shearer (ed.) Defining and Measuring Sustainability. The United National University and The World Bank, Washington, D.C.

Dale, V.H. and Pearson, S.M. 1997. Quantifying habitat fragmentation due to land-use change in Amazonia. Pp. 400-410 In (W.F. Laurance and R.O. Bierregaard, ed.) Tropical Forest Remnants: Ecology, Management and Conservation of Fragmented Communities. Chicago: The University of Chicago Press.

Pedlowski, M.A., V.H. Dale, M.A.T. Matricardi, and E.P. da Silva Filho. 1997. Patterns and impacts of deforestation in Rondônia, Brazil. *Landscape and Urban Planning* 38: 149-157.

Dale, V.H., King, A.W., Mann, L.K., Washington-Allen, R.A., and McCord, R.A. 1998. Assessing land-use impacts on natural resources. *Environmental Management* 22:203-211.

Dale, V.H. and P.D. Parr. 1998. Preserving DOE's research parks. *Issues in Science and Technology*. XIV(2): 73-77.

Turner, M.G. and Dale, V.H. 1998. What have we learned from large, infrequent disturbances? *Ecosystems* 1:493-496.

Dale, V.H., Lugo, A. MacMahon, J. and Pickett, S. 1998. Ecosystem management in the context of large, infrequent disturbances. *Ecosystems* 1:546-557.

Dale, V.H., S. Brown, R.A. Haeuber, N. T. Hobbs, N. Huntly, R. J. Naiman, W. E. Riebsame, M. G. Turner, and T. J. Valone. 2000. Ecological principles and guidelines for managing the use of land. *Ecological Applications* 10: 639-670.

Dale, V.H. and R. A. Haeuber. 2000. Perspectives on land use. *Ecological Applications* 10: 671-672.

Mann, L. K., A. W. King, V. H. Dale, W. W. Hargrove, R. Washington-Allen, L. Pounds, T.A. Ashwood. 1999. The role of soil classification in geographic information system modeling of habitat pattern: Threatened calcareous ecosystems. *Ecosystems* 2:524-538.

Dale, V.H., A.W. King, L.K. Mann, and T.L. Ashwood. 2000. Contributions of spatial information and models to management of rare and declining species. In (M.J. Hill and R.J. Aspinall, Editors) Spatial Information for Land Management, Gordon and Breach Science Publishers, Lausanne, Switzerland. Pages 159-172.

Dale, V.H. and Parr, P. 2000. Richardson acts to save DOE's research parks. *Issues in Science and Technology*. Spring: 28.

Dale, V.H., S. Brown, R. A. Haeuber, N. T. Hobbs, N. Huntly, R. J. Naiman, W. E. Riebsame, M. G. Turner, and T. J. Valone. 2001. Ecological Guidelines for Land Use and Management. Pages 3-36 In (V. H. Dale and R. A. Haeuber, editors). *Applying Ecological Principles to Land Management*. Springer Verlag: New York.

Dale, V.H. 2001. Applying Ecological Guidelines for Land Management to Farming in the Brazilian Amazon. Pages 213-215 In (V. H. Dale and R. A. Haeuber, editors). *Applying Ecological Principles to Land Management*. Springer Verlag: New York.

Haeuber, R. and Dale V.H. 2001. New directions in land management: Incorporation of ecological principles. Pages 316-330 In (V. H. Dale and R. A. Haeuber, editors), *Applying Ecological Principles to Land Management*. Springer Verlag: New York.

Pedlowski, MA, Dale, VH and Matricardi, E.A.T. 1999. A Criação de Áreas Protegidas e os Limites da Conservação Ambiental em Rondônia. *AMBIENTE E SOCIEDADE* 2(5)93-108.

Dale, V.H. 2001. Disturbance. *Encyclopedia of Global Environmental Change*. Volume Two: The Earth system: biological and ecological dimensions of global environmental change. Wiley.

Dale, V.H. 2001. Succession. *Encyclopedia of Global Environmental Change*. Volume Two: The Earth system: biological and ecological dimensions of global environmental change. Wiley.

Dale, V. H., Fortes, D. T., and Ashwood, T. L. 2002. A landscape transition matrix approach for land management. Pages 265-293 In (J. Liu and W. Taylor, ed.) *Integrating Landscape Ecology into Natural Resource Management*. Cambridge University Press.

Navar, J., Mendez, E. and Dale, V.H. 2003. Estimating stand biomass in the Tamaulipan thornscrub of northeastern Mexico. *Annals of Forest Science* 59(8): 813-821.

Dale, V.H., Brown, S., Calderón, M.O., Montoya, A.S. and Martínez, R.E. 2003. Estimating baseline carbon emissions for the Eastern Panama Canal Watershed. *Mitigation and Adaptation Strategies for Global Change* 8(4): 323-348.

Návar, J., E. Méndez, Graciano, J., Dale, V., and Parresol, B. 2004. Biomass equations for shrub species of Tamaulipan thornscrub of northeastern Mexico. *Journal of Arid Environments* 59(4):657-674.

Dale, V.H., Brown, S., Calderón, M.O., Montoya, A.S. and Martínez, R.E. 2005. Projected land-use change for the Eastern Panama Canal Watershed and its potential impact, Pages 337-345 IN (R. Harmon, ed.) *The Río Chagres, Panama: A Multidisciplinary Profile of a Tropical Watershed*, Springer, The Netherlands.

Dale, V.H., D. Druckenbrod, L. Baskaran, M. Aldridge, M. Berry, C. Garten, L. Olsen, R. Efroymsen, and R. Washington-Allen. 2005. Vehicle impacts on the environment at different spatial scales: Observations in west central Georgia, USA. *Journal of Terramechanics* 42: 383-402.

Theobald, D.M., T. Spies, J. Kline, B. Maxwell, N.T. Hobbs, V.H. Dale. 2005. Ecological support for rural land-use planning and policy. *Ecological Applications* 15(6): 1906-1914.

Dale, V.H., S. Archer, M. Chang, and D. Ojima. 2005. Ecological impacts and mitigation strategies for rural land management. *Ecological Applications* 15(6): 1879-1892.

Dale, V.H., D. Druckenbrod, L. Baskaran, C. Garten, L. Olsen, R. Efroymson, and R. Washington-Allen, M. Aldridge, M. Berry. 2005. Analyzing land-use change at different scales in Central Georgia. Pages 1-4 *In* Proceedings of the 4th Southern Forestry and Natural Resource GIS conference. Athens, Georgia, Dec 16-18, 2004.

Efroymson, R. A., V. H. Dale, L. M. Baskaran, M. Chang, M. Aldridge, and M. Berry. 2005. Planning transboundary ecological risk assessments at military installations. *Hum. Ecol. Risk Assess.* 11:1193-1215.

Baskaran, L.M., V.H. Dale, R. A. Efroymson, and W. Birkhead. 2006. Habitat modeling within a regional context: An example using gopher tortoise. *American Midland Naturalist* 155:335-351.

Efroymson, R.A., V.A. Morrill, V.H. Dale, T.F. Jenkins, and N.R. Giffen. 2009. Habitat disturbance at explosives-contaminated ranges. pp. 253-276 *In* Sunahara, G., J. Hawari, G. Lotufo, R. Kuperman, and G., J. Hawari (eds.) *Ecotoxicology of Explosives and Unexploded Ordnance*, CRC Press, Boca Raton, FL.

M Scouvar, R Adams, M Caldas, VH Dale, B Mertens, V. Nedelec, P Pacheco, B Rihoux, EF Lambin. 2007. Causes of deforestation in the Brazilian Amazon: a Qualitative Comparative Analysis. *Journal of Land Use Science* 2(4):257-282.

Efroymson, R.A., H. I. Jager, V. H. Dale, and J. D. Westervelt. 2009. A framework for developing management goals for Species at Risk with examples from military installations in the United States. *Environ. Manage.* (online version available, page numbers to be determined) DOI 10.1007/s00267-009-9385-6

Druckenbrod DL and VH Dale. 2012. Experimental response of understory plants to mechanized disturbance in an oak-pine forest. *Ecological Indicators* 15:181-187.

Climate Change

Graham, R.L., M.L. Turner, and V.H. Dale. 1989. CO₂-induced climate change and forest resources. Pp. 243-242 *In* Proceedings of the Second US-USST Symposium on Air Pollution Effects in Vegetation, Gatlinburg, Tenn., September 1988. *USFS General Technical Report*.

Dale, V.H. and J.F. Franklin. 1989. Potential effects of climate change on stand development in the Pacific Northwest. *Canadian Journal of Forest Research* 19:1581-1590.

Graham, R.L., M.G. Turner, and V.H. Dale. 1990. Increasing CO₂ and climate change: effects on forests. *BioScience* 40(8): 575-587.

Post, W.M., Peng, T.-H., Emanuel, W., King, A.W., Dale, V.H., and DeAngelis, D.L. 1990. The global carbon cycle. *American Scientist* 78(4): 310-326.

Franklin, J.F., F.J. Swanson, M.E. Harmon, D.A. Perry, T.A. Spies, V.H. Dale, A. McKee, W.K. Ferrell, S.V. Gregory, J.D. Lattin, T.D. Schowalter, and D. Larson. 1992. Pp. 244-257 In R.L. Peters and T.E. Lovejoy, ed. Effects of global climatic change on forests in northwestern North America. The Consequences of the Greenhouse Effect for Biological Diversity. Yale University Press.

Franklin, J.F., F.J. Swanson, M.E. Harmon, D.A. Perry, T.A. Spies, V.H. Dale, A. McKee, W.K. Ferrell, J.E. Means, S.V. Gregory, J.D. Lattin, T.D. Schowalter, and D. Larson. 1991. Effects of global climatic change on forests in northwestern North America. *Northwest Environmental Journal* 7(2):233-254.

Dale, V.H. and H.M. Rauscher. 1994. Assessing impacts of climate change on forests: the state of biological modeling. *Climatic Change* 28:65-90.

Dale, V.H. and H.M. Rauscher. 1994. Assessing impacts of climate change on forests: the state of biological modeling. Pages 65-90 In K.D. Frederick and N.J. Rosenberg (eds.) Assessing the Impacts of Climate Change on Natural Resource Systems. Boston: Kluwer Academic Publishers.

Joyce, L.A., J. Aber, S. McNulty, V. Dale, A. J. Hansen, L. Irland, R. P. Neilson, K. Skog. 2001. Forests. Pages 489-524 IN Climate Change Impacts: The Potential Consequences of Climate Variability and Change, A report of the National Assessment Synthesis Team of the U. S. Global Change Research Program, Cambridge University Press, Cambridge, UK.

Dale, V.H., Joyce, L.A., McNulty, S., and Neilson, R.P. 2000. The interplay between climate change, forests, and disturbances. *the Science of the Total Environment* 262:201-204.

Dale, V.H., L.A. Joyce, S. McNulty, R.P. Neilson, M.P. Ayres, M.D. Flannigan, P.J. Hanson, L.C. Irland, A.E. Lugo, C.J. Peterson, D. Simberloff, F.J. Swanson, B.J. Stocks, and B.M. Wotton. 2001. Forest disturbances and climate change. *BioScience* 51(9):723-734.

Hansen, A.J., R.P. Neilson, V.H. Dale, C. Flather, L. Iverson, D.J. Currie, P. Bartlein. 2001. Global change in forests: responses of species, communities, and biomes. *BioScience* 51(9): 765-779.

Hansen, A. and V.H. Dale. 2001 Biodiversity in United States forests under global climate change. *Ecosystems* 4:161-163.

Dale, VH, KO Lannon, ML Tharp, DG Hodges, and J Fogel. 2009. Effects of climate change, land-use change, and invasive species on the ecology of the Cumberland Forests. *Canadian Journal of Forest Research* 39:467-480.

Dale, VH, ML Tharp, KO Lannon and DG Hodges. 2010. Modeling Transient Response of Forests to Climate Change. *Science of the Total Environment*. 408:1888-1901.
<http://dx.doi.org/10.1016/j.scitotenv.2009.11.050>

Relationship between Climate Change and Land Use

Dale, V.H., Houghton, R.A., Hall, C.A.S. 1991. Estimating the effects of land use change on global atmospheric CO₂ concentrations. *Canadian Journal of Forest Research* 21:87-90.

Dale, V.H. 1995. Integrated assessment and the relation between land-use change and climate change. Pages 75-77 in Proceedings of the Third Japan-U.S. Workshop on Global Change Modeling and Assessment: Improving Methodologies and Strategies. Honolulu, Hawaii, Octo 25-27, 1994. Office of Earth Science and Technology, Research and Development Bureau, Science and Technology Agency, Tokyo, Japan.

Dale, V.H. and A.W. King. 1996. Implications of uncertainty in land-use change for global terrestrial CO₂ flux. Pp. 284-293 In (E. Korpilahti, H. Mikkela, and T. Salpnen, editors) Caring for the Forest: Research in a Changing World. International Union of Forestry Research Organizations XX World Congress Report, Vol II. Gummerus Printing, Jyvaskyla, Finland.

Dale, V.H. 1997. The relationship between land-use change and climate change. *Ecological Applications* 7:753-769.

Environmental Economics

Jones, D., Dale, V.H., Beauchamp, J.J., Pedlowski, M.A., O'Neill, R.V. 1995. Farming in Rondônia. *Resource and Energy Economics* 17: 155-188.

Dale, V.H., Russell, C. S. , Hadley, M., Kane, M. and Gregory, R. 1997. Applying multi-attribute utility techniques to environmental valuation: Forest ecosystem study. Beijer Discussion Paper No. 103, Beijer International Institute of Ecological Economics, The Swedish Academy of Sciences.

Russell, C., Dale, V., Lee, J., Jensen, M.H., Kane, M., Gregory, R. 2001. Experimenting with multi-attribute utility survey methods in a multidimensional valuation problem. *Ecological Economics* 36: 87-108.

Dale, V.H. and Polasky, S. 2007. Measures of the effects of agricultural practices on ecosystem services. *Ecological Economics* 64:286-296.

Social Science

Southworth, F., Dale, V.H., O'Neill, R.V. 1991. Contrasting patterns of land use in Rondonia, Brazil: simulating the effects on carbon release. *International Social Sciences Journal* 130: 681-698.

Schiller, A., C. T. Hunsaker, M. A. Kane, A. K. Wolfe, V. H. Dale, G. W. Suter, C. S. Russell, G. Pion, M. H. Jensen, and V. C. Konar. 2001. Communicating ecological indicators to decision makers and the public. *Conservation Ecology* 5(1)19. [online] URL<http://www.consecol.org/vol5/iss1/art19>

Ecological Studies Relating to Social Science

Bierregaard, R. and Dale, V.H. 1996. Islands in an everchanging sea: The ecological and socioeconomic dynamics of Amazonian rainforest fragments. Pages 187-204 In (J. Schelhas and R. Greenberg, ed.) Forest Patches in Tropical Landscapes. Island Press, Washington, D.C.

Frohn, R.C., K.C. McGwire, V.H. Dale and J.E. Estes. 1996. Using satellite remote sensing analysis to evaluate a socio-economic and ecological model of deforestation in Rondônia, Brazil. *International Journal of Remote Sensing* 17:3233-3255.

Dale, V.H., M. Aldridge, T. Arthur, L. Baskaran, M. Berry, M. Chang, R. Efroymson, C. Garten, C. Stewart, and R. Washington-Allen. 2006. Bioregional planning in Central Georgia. *Futures* 38(4): 471-489.

Forest Conservation

Hemstrom, M., and V. Adams. 1982. Modeling long-term succession in the Pacific Northwest. In J. Means (ed.), *Forest Succession and Stand Development in the Northwest*. Forest Research Laboratory, Oregon State University, Corvallis, Oregon.

Dale, V.H., M. Hemstrom, and J. Franklin. 1984. The impact of disturbance frequency on forest succession in the Pacific Northwest. *Proceedings of the 1983 Society of American Foresters Annual Convention*. pp. 300-304.

Dale, V.H., and S. McLaughlin. 1984. Forest growth trends in the eastern United States: Empirical and modeling approaches. University of Maine College of Forestry Technical Note No. 93. pp. 31-40.

Dale, V., M. Hemstrom, and J. Franklin. 1986. The long-term effects of disturbances on forest succession on the Olympic Peninsula. *Canadian Journal of Forest Research* 16:56-67.

Dale, V.H., and T.W. Doyle. 1987. The role of stand history in assessing forest impacts. *Environmental Management* 11(3):351-357.

Dale, V.H. 1987. Using a model of forest community dynamics for decision making. *Proceedings of the 1987 Forestry Issues Conference*. Pennsylvania State University, University Park, Pennsylvania. March 9-11, 1987.

Dale, V., and R. Gardner. 1987. Assessing regional impacts of growth declines using a forest succession model. *Journal of Environmental Management* 24:83-93.

Pastor, J., R.H. Gardner, V.H. Dale, and W.M. Post. 1987. Successional changes in nitrogen availability as a potential factor contributing to spruce declines in boreal North America. *Canadian Journal of Forest Research* 17:1394-1400.

Dale, V.H. 1989. Modeling the effects of air pollution on regional forest development: Factors to consider for South East Asia. In *Proceedings from "Workshop to Design an Acid Deposition Policy Model for South-East Asia."* Bangkok, Thailand, November 13-17, 1989.

Dale, V.H., R.H. Gardner, D.L. DeAngelis, C. Eagar, and J.W. Webb. 1991. Elevation-mediated effects of balsam woolly adelgid on southern Appalachian spruce-fir forests. *Canadian Journal of Forest Research* 21:1639-1648.

Offerman, H., Dale, V., Pearson, S., Bierregaard, R. and O'Neill, R. 1995. Effects of forest fragmentation on neotropical fauna: current research and data availability. *Environmental Reviews* 3(2): 191-211.

Turner, M.G., V.H. Dale, and E.H. Everham. 1997. Fires, hurricanes and volcanoes: comparing large disturbances. *BioScience* 47:758-768.

Dale, V.H. 1998. Managing forests as ecosystems: A success story or a challenge ahead? Pages 50-68 In (M.L. Pace and P.M. Groffman, editors). *Successes, Limitations, and Frontiers in Ecosystem Ecology*. New York: Springer-Verlag.

Committee of Scientists. 1999. Sustaining the people's lands: recommendations for stewardship of the national forests and grasslands into the next century. U.S. Department of Agriculture, Washington, D.C., USA.

Johnson, K.N., Agee, J., Beschta, R., Dale, V., Hardesty, L., Long, J., Nielsen, L., Noon, B., Sedjo, R., Shannon, M., Trosper, R., Wilkinson, C. and Wondolleck, J. 1999. Sustaining the people's lands: recommendations for stewardship of the national forests and grasslands into the next century. *Journal of Forestry*. May: 6-12.

Dale, V. H., Agee, J., Long, J, and Noon, B. 1999. Ecological sustainability is fundamental to managing the national forests and grasslands. *Bulletin of the Ecological Society of America*.80(3): 207-209.

Dale, V.H. and S. M. Pearson. 1999. Modeling the driving factors and ecological consequences of deforestation in the Brazilian Amazon. Pages 256-276 In (D. L. Mladenoff and W. B. Baker, editors) *Advances in Spatial Modeling of Forest Landscape Change*. Cambridge University Press.

Dale, V. 2003. Opportunities for using ecological models for resource management. Pages 3-22 In Dale, V.H. (editor) *Ecological Modeling for Resource Management*. New York: Springer-Verlag.

Dale, V.H. 2011. The role of disturbance in seasonally dry tropical forest landscapes. Pages 75-97 In McShea, J., S. Davies, N. Bhumpakphan (Editors) *The Ecology and Conservation of Seasonally Dry Forests in Asia*. Washington, DC: Smithsonian Institution Scholarly Press.

Evaluating Conservation Effectiveness

O'Neill, R.V., J.R. Krummel, R.H. Gardner, G. Sugihara, B. Jackson, D.L. DeAngelis, B.T. Milne, M.G. Turner, B. Zygmunt, S.W. Christensen, V.H. Dale, and R.L. Graham. 1988. Indices of landscape pattern. *Landscape Ecology* 1:153-162.

Dale, V.H. 1997. Criteria and indicators for assessing sustainability of forest management: conservation of biodiversity. *Bulletin of the Ecological Society of America* 78:291-292.

Stork, N.E., T.J.B. Boyle, V. Dale, H. Eeley, B. Finegan, M. Lawes, N. Manokaran, R. Prabhu, and J. Soberon. 1997. Criteria and indicators for assessing sustainability of forest management: conservation of biodiversity. Center for International Forestry Research Working Paper No. 17. Bogor, Indonesia.

Dale, V.H. and O'Neill, R.V. 1999. Tools for assessing environmental conditions, In (Dale, V.H. and English, M.R., editors) *Tools to Aid Environmental Decision Making*. New York, Springer -Verlag.

English, M.R., Dale, V.H., Van Riper-Geibig, C. and Ramsey, W.H. 1999. Overview. Pages 1-31 in (Dale, V.H. and English, M.R., editors) *Tools to Aid Environmental Decision Making*. New York, Springer-Verlag.

English, M. E. and Dale, V.H. 1999. Next steps in designing and implementing analytic tools for decision making, In (Dale, V.H. and English, M.R., editors) *Tools to Aid Environmental Decision Making*. New York, Springer-Verlag.

Dale, V.H. and Beyeler, S.C. 2001. Challenges in the development and use of ecological indicators. *Ecological Indicators* 1(1): 3-10.

Peacock, A. D., S. J. MacNaughton, J. M. Cantu, V. H. Dale and D. C. White. 2002. Soil microbial biomass and community composition along an anthropogenic disturbance gradient within a longleaf pine habitat. *Ecological Indicators* 1(2):113-122.

Dale, V.H., Beyeler, S.C., and Jackson, B. 2002. Understory indicators of anthropogenic disturbance in longleaf pine forests at Fort Benning, Georgia, USA. *Ecological Indicators* 1(3): 155-170.

Garten, C.T., T.L. Ashwood, and V.H. Dale. 2003. Effect of military training on indicators of soil quality at Fort Benning, Georgia. *Ecological Indicators* 3(3) 171-180.

Druckenbrod, D.L.; Dale, V.H. 2004. Sustaining the landscape: a method for comparing current and desired future conditions of forest ecosystems in the North Cumberland Plateau and Mountains. ORNL/TM-2004/314, Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA.

Dale, V.H., Mulholland, P., Olsen, L. M., Feminella, J., Maloney, K., White, D. C., Peacock, A., and Foster, T. 2004. "Selecting a Suite of Ecological Indicators for Resource Management," *Landscape Ecology and Wildlife Habitat Evaluation: Critical Information for Ecological Risk Assessment, Land-Use Management Activities and Biodiversity Enhancement Practices, ASTM STP 1458*, L. A. Kapustka, H. Gilbraith, M. Luxon, and G. R. Biddinger, Eds., ASTM International, West Conshohocken, PA.

Olsen, L.M., Washington-Allen, R.A, and V.H. Dale. 2005. Time-series analysis of land cover using landscape metrics. *GIScience and Remote Sensing*. 42(3): 200-223.

Druckenbrod, D.L., V.H. Dale, and L.M. Olsen. 2006. Forest conservation in the Cumberland Plateau and Mountains: Assessing distribution and structure of landform forest associations. General Technical Report, USDA Forest Service, Southern Forest Research Station, Asheville, North Carolina, USA.

Olsen, L.M., Dale, V.H. and H.T. Foster. 2007. Landscape patterns as indicators of ecological change at Fort Benning, Georgia, USA. *Landscape and Urban Planning* 79(2):137-149.

Druckenbrod, D.L., V.H. Dale, and L.M. Olsen. 2007. Comparing current and desired ecological conditions at a landscape scale in the Cumberland Plateau and Mountains, USA. *Journal of Land Use Science* 1(1):169-189.

Klinger, T. and V. Dale. 2007. The promise and the challenge of cooperative conservation. *Frontiers in Ecology and the Environment* 5(2): 97-98.

Dale, V.H., Peacock, A.D, C.T Garten, E. Sobek, and A. Wolfe. 2008. Selecting indicators of soil, microbial, and plant conditions to understand ecological changes in Georgia pine forests. *Ecological Indicators* 8:81-827.

Foster, T., V.H. Dale, L.M. Olsen. 2009. Environmental management and policy using ecological indicators derived from archaeological and historical data. *IN The Archaeology of Anthropogenic Environments*. Publisher: Southern Illinois University.

Foster T, Olsen L, Dale V and Chen A. 2010 Studying the past for the future: Managing modern biodiversity for historic and prehistoric data. *Hunan Organization* 69(2): 149-157.

Science and Decision Making

Olson, R.J., T. Boden, J. Solomon, V.H. Dale, and S. Christensen. 1988. Guidelines for computer-based information exchange. In *Proceedings of Piecing the Puzzle Together: A Conference on Integrating Data for Decision Making*. May 27-29, 1987. (L. Allison and R.J. Olson, ed.) National Governor's Association, Washington, D.C.

Post, W.M., Dale, V.H., DeAngelis, D.L., Mann, L.K., Mulholland, P.J., O'Neill, R.V., Peng, T.H., and Farrell, M.P. 1990. Formulating energy policies related to fossil fuel use: Critical uncertainties in the global carbon cycle. Pp. 77-95 In *Global Change: A Southern Perspective*. Proceedings of the 1990 Southeast Climate Symposium. Southeast Regional Climate Center, Clemson University, Columbus, S.C.

English, M.R. and Dale, V.H. 1996. The National Center for Environmental Decision-Making Research: Tools to improve environmental decision making processes. Proceedings of the Air and Waste Management Association Meeting, Nashville, Tenn. June 23-26, 1996.

Dale, V.H. 1996. The National Center for Decision-Making Research. *Bulletin of the Ecological Society of America* 77(2):78-79.

Kickert, R.N., Dale, V.H., and McCord, RA. 1996. Spatial Ecological Risk Simulation of U.S. Department of Energy lands applied to military lands. *Simulation* 66(4): 263-264.

Dale, V.H., T. Ashwood, A.W. King, L.K. Mann, and R.N. Kickert. 1996. Assessment of Training Impacts on Ecological Resources. Proceedings of workshop on "The contribution of adaptive ecological economic modeling and assessment for sustainable development and the roles of stakeholders," Boston, Mass., July 31- August 4, 1996.

Dale, V.H. 2002. Science and decision making. Pages 139-152 *In* R. Costanza and S.E. Jorgensen, ed. *Understanding and Solving Environmental Problems in the 21st Century: Toward a New, Integrated hard problem science*. Elsevier, The Netherlands.

Rykiel, E.J., J. Berkson, V.A. Brown, W. Kerwitt, I. Peters, M. Schwartz, J. Schogren, D. Van der Molen, R. Blok, M. Borsuk, R. Bruins, K. Cover, V. Dale, J. Dew, C. Etnier, L. Fanning, F. Felix, M. Nordin, Hasan, H. Hong, A.W. King, N. Krauchi, K. Lubinsky, J. Olson, J. Onigkeit, G. Pattersonm K.S. Rajan, P. Reichert, K. Sharma, V. Smith, M. Sonnenschein, R. St-Louis, D. Stuart, R. Supalla, and H. van Latesteijn. 2002. Science and decision making. Pages 153-166 *In* R. Costanza and S.E. Jorgensen, ed. *Understanding and Solving Environmental Problems in the 21st Century: Toward a New, Integrated hard problem science*. Elsevier, The Netherlands.

Dale, V., C. Rewerts, W. Van Winkle, M. Harwell, M. Vasiesich, and S. Hodapp. 2003. Barriers to the use of ecological models in decision making. Pages 109-124 In Dale, V.H. (editor) *Ecological Modeling for Resource Management*. New York: Springer-Verlag.

Gustafson, E., J. Nestler, L. Gross, K. Reynolds, D. Yaussy, T. Maxwell, and V. Dale. 2003. Evolving approaches and technologies to enhance the role of ecological modeling in decision making. Pages 135-166 In Dale, V.H. (editor) *Ecological Modeling for Resource Management*. New York: Springer-Verlag.

Dale, V. 2003. New directions in ecological modeling for resource management. Pages 310-320 In Dale, V.H. (editor) *Ecological Modeling for Resource Management*. New York: Springer-Verlag.

Dale, V.H. , F.J. Swanson, and C.M. Crisafulli. 2005. Ecological Perspectives on Environmental Management Following the 1980 Eruption of Mount St. Helens. Pages 277-286 In Dale, V.H., Swanson, F.J., and Crisafulli, C.M. (editors) *Ecology Responses to the 1980 Eruption of Mount St. Helens*. New York: Springer-Verlag.

Dale, V.H., G.R. Biddinger, M.C. Newman, J.T. Oris, G.W. Suter, T. Thompson, T.M. Armitage, J.L. Meyer, R.M. Allen-King, G.A. Burton, P.M. Chapman, L.L. Conquest, I.J. Fernandez, W.G. Landis, L.L. Master, W.J. Mitsch, T.C. Mueller, C.F. Rabeni, A.D. Rodewald, J.G. Sanders, I.L. van Heerden. 2008. Enhancing the ecological risk assessment process. *Integrated Environmental Assessment and Management* 4(3):306-313.

Ecological modeling

Adams, V.D., D.L. DeAngelis, and R.A. Goldstein. 1975. Analysis of the time delay in a host-parasite model. ORNL Report, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Swartzman, G., and V. Adams. 1979. Simulating the effects of increased temperature in a plankton ecosystem. NUREG Report CR-0974, Nuclear Regulatory Commission, Washington, D.C.

Adams, V., D.L. DeAngelis, and R.A. Goldstein. 1980. Stability analysis of the time-delay in a host-parasitoid model. *Journal of Theoretical Biology* 83:43-62.

Dale, V.H., and G.L. Swartzman. 1984. Simulating the effects of increased temperature in a plankton ecosystem: A case study. Pages 395- 428 In E. Shubert (ed.), *Algae as Ecological Indicators*. Academic Press.

Dale, V., and M. Hemstrom. 1984. Documentation of CLIMACS: Computer Linked Integrative Model for Assessing Community Structure. USDA Forest Service Research Paper PNW-327.

Dale, V.H., T.W. Doyle, and H.H. Shugart. 1985. A comparison of tree growth models. *Ecological Modelling* 29:145-169.

Johnson, D.W. and V.H. Dale. 1986. Nitrogen cycling models and their utility in simulating forest harvesting. Proceedings of the May 1986 meeting of IEA, Toronto, Canada.

Dale, V.H., H.I. Jager, R.H. Gardner, and A.E. Rosen. 1988. Using sensitivity analysis to improve predictions of broad-scale forest development. *Ecological Modelling* 42:165-178.

Franklin, R.L.A., R.H. Gardner, V.H. Dale, and P.S. White. 1988. PLOTSAM: A Simulation of Systematic and Random Sampling. Oak Ridge National Laboratory TM-10670, Oak Ridge, Tennessee.

Gardner, R.H., V.H. Dale, and R.V. O'Neill. 1989. Error propagation and uncertainty in process modeling. In R.K. Dixon, R.S. Meldehl, G.A. Ruark, and W.G. Warren (ed.s) *Process Modeling of Forest Growth Responses to Environmental Stress*. Timber Press: Portland, OR. pp. 208-219.

Dale, V.H., R.L.A. Franklin, W.M. Post, and R.H. Gardner. 1991. Sampling ecological information: Choice of sample size. *Ecological Modelling* 57:1-10.

Dale, V.H. and W. Van Winkle. 1998. Models provide understanding, not belief. *Bulletin of the Ecological Society of America* 79(2): 169-170.

Van Winkle, W. and V.H. Dale. 1998. Model interactions. *Bulletin of the Ecological Society of America* 79(4): 257-259.

Dale, V.H., F. Akhtar, M. Aldridge, L. Baskaran, M. Berry, M. Chang, R. Efroymson, C. Garten, E. Lingerfelt, C. Stewart. 2008. Modeling impacts of land-use on quality of air, water, noise, and habitats for a five county region in Georgia. *Ecology and Society*. 13(1) [online]. URL: <http://www.ecologyandsociety.org/voll13/iss1/art10/>

Bioenergy

Kline, KL, Oladosu GA, Wolfe AK, Perlack RD, Dale VH, McMahon M. 2007. Biofuel feedstock assessment for selected countries. ORNL/TN-2007/224. www.osti.gov/servlets/purl/974620-giaAAN/

Kline, KL and Dale, VH. 2008. Biofuels, causes of land-use change, and the role of fire in greenhouse gas emissions. *Science* 321:199.

Robertson, GP, VH Dale, OC Doering, SP Hamburg, JM Melillo, MM Wander, WJ Parton, PR Adler, JN Barney, RM Cruse, CS Duke, PM Fearnside, RF Follett, HK Gibbs, J Goldemberg, DJ Mladenoff, D Ojima, MW Palmer, A Sharpley, L Wallace, KC Weathers, JA Wiens, and WW Wilhelm. 2008. Sustainable Biofuels Redux, *Science* 322(5898): 49–50. DOI: 10.1126/science.1161525.

Kline KL , VH Dale, R Lee, and P. Leiby. 2009. In Defense of Biofuels, Done Right. *Issues in Science and Technology* 25(3): 75-84.

Dale, V, K Kline, P. Mulholland, M. Downing, R. Graham, and L Wright (2009) “Selecting Metrics for Sustainable Bioenergy Feedstocks” in the Proceedings of the Second Workshop. Beijing, October 15-17, 2008, China-US Joint Research for Ecosystem and Environmental Change [Pages 49-53, published by the Institute for a Secure and Sustainable Environment, University of Tennessee].

Hecht, AD, D Shaw, R Bruins, V Dale, K Kline, A Chen. 2009. Good policy follows good science: Using criteria and indicators for assessing sustainable biofuels production. *Ecotoxicology* 18(1):1-4.

CBES (Center for BioEnergy Sustainability, Oak Ridge National Laboratory). 2009. Land-Use Change and Bioenergy: Report from the 2009 workshop, ORNL/CBES-001, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy and Oak Ridge National Laboratory, Center for Bioenergy Sustainability (<http://www.ornl.gov/sci/besd/cbes.shtml>).

Kline, K. L., V. H. Dale, A. Grainger. 2010. Challenges for Bioenergy Emission Accounting. *Science E-Letter* (2 March 2010) <http://www.sciencemag.org/cgi/eletters/326/5952/527>

Dale, VH, K. Kline, J. Wiens, and J. Fargione. 2010. Biofuels: Implications for Land Use and Biodiversity. Ecological Society of America. <http://esa.org/biofuelsreports/>.

Dale VH, R Lowrance, P Mulholland, P Robertson. 2010. Bioenergy Sustainability at the Regional-Scale. *Ecology and Society* **15**(4): 23. [online] URL: <http://www.ecologyandsociety.org/vol15/iss4/art23/>

Dale, VH, R Efrogmson, and K Kline. 2010. Using a Broad-scale Perspective to Address Changes in Land, Climate, and Energy. The Climate-Energy Nexus: Proceedings of the 2009 China-US Joint Research for Ecosystem and Environmental Change, pages 52-55, published by the Institute for a Secure and Sustainable Environment, University of Tennessee.

Dale, VH, KL Kline, LL Wright, RD Perlack, M Downing, RL Graham. 2011. Interactions among bioenergy feedstock choices, landscape dynamics and land use. *Ecological Applications* **21**(4):1039-1054.

McBride, A, VH Dale, L Baskaran, M Downing, L Eaton, RA Efrogmson, C Garten, KL Kline, H Jager, P Mulholland, E Parish, P Schweizer, and J Storey. 2011. Indicators to support environmental sustainability of bioenergy systems. *Ecological Indicators* **11**(5) 1277-1289.

Dale VH, Efrogmson RA and Kline KL. 2011. The land use – climate change – energy nexus. *Landscape Ecology* **26**(6):755-773.

Kline KL, GA Oladosu, VH Dale, and AC McBride. 2011. Scientific analysis is essential to assess biofuel policy effects: In response to the paper by Kim and Dale on “Indirect land-use change for biofuels: Testing predictions and improving analytical methodologies.” *Biomass and Bioenergy* **35**:4488-4491.

Parish, ES, Hilliard M, LM Baskaran, VH Dale, NA Griffiths, PJ Mulholland, A Sorokine, ME Downing, R Middleton, NA Thomas. In press. Multimetric Spatial Optimization of Switchgrass Plantings Across a Watershed. *Biofuels, Bioprod. Bioref.*

Dale, V. H. and K. L. Kline. In press. Modeling for integrating science and management. Chapter 6 In D.G. Brown, N. H. F. French, B.C. Reed, and D. T. Robinson (editors), *Land Use and the Carbon Cycle: Science and Applications in Coupled Natural-Human Systems*, Cambridge University Press.

Community Ecology

Adams, V. 1983. Temporal partitioning of blooming phenology in *Pedicularis* on Mount Rainier. *Canadian Journal of Botany* **61**(3):786-791.

Effects of the Eruption and Recovery at Mount St. Helens

Adams, V., and A.B. Adams. 1982. Initial recovery of the vegetation on Mount St. Helens. In S. A. C. Keller (ed.), *Mount St. Helens: One Year Later*. Eastern Washington University Press, Cheney, Washington, pp. 105-114.

Martin, D., L. Wasserman, and V. Dale. 1986. Influence of riparian vegetation on posteruptive survival of coho salmon fingerlings on the west-side streams of Mount St. Helens, Washington. *North American Journal of Fisheries Management* 6:1-8.

Dale, V.H. 1986. Plant recovery on the debris avalanche at Mount St. Helens. In S. A. C. Keller (ed.), *Mount St. Helens: Five Years Later*. Eastern Washington University Press, Cheney, Washington. pp. 208-214.

Adams, A.B., V.H. Dale, A.R. Kruckeberg, and E. Smith. 1987. Plant survival, growth form and regeneration following the May 18, 1980, eruption of Mount St. Helens, Washington. *Northwest Science* 61:160-170.

Adams, A.B., and V.H. Dale. 1987. Comparisons of vegetative succession following glacial and volcanic disturbances. In D. E. Bilderback (ed.), *Mount St. Helens 1980: Botanical Consequences of the Explosive Eruptions*, University of California Press, Los Angeles. pp. 70-147.

Dale, V.H. 1989. Wind dispersed seeds and plant recovery on the Mount St. Helens debris avalanche. *Canadian Journal of Botany* 67:1434-1441.

Dale, V.H. 1991. The debris avalanche at Mount St. Helens: Vegetation establishment in the ten years since the eruption. *National Geographic Research & Exploration* 7(3):328-341.

Dale, V.H. 1992. Diversity impact and recovery at Mount St. Helens: a function of disturbance. *Northwest Environmental Journal* 8(1): 185-187.

Dale, V.H. 1992. Exotic seeds reduce biodiversity on the Mount St. Helens debris avalanche. *Northwest Environmental Journal* 8(1): 183-185.

Dale, V. H., J. Delgado-Acevedo, and J. MacMahon. 2005. Effects of modern volcanic impacts on Vegetation. Pages 227-249 In J. Marti and G. Ernst (editors) *Volcanoes and Environment*, Cambridge University Press, Cambridge.

Dale, V.H. and W.M. Adams. 2003. Plant establishment 15 years after the debris avalanche at Mount St. Helens, Washington. *The Science of the Total Environment* 313:101-113.

Dale, V.H., F.J. Swanson, and C.M. Crisafulli. 2005. Disturbance, Survival, and Succession: Context for Understanding Ecological Responses to the 1980 Eruption of Mount St. Helens. Pages 3-12 In Dale, V.H., Swanson, F.J., and Crisafulli, C.M. (editors) *Ecology Responses to the 1980 Eruption of Mount St. Helens*. New York: Springer-Verlag.

Dale, V.H., D.R. Campbell, W.M. Adams, C.M. Crisafulli, V. Dains, P.M. Frenzen, and R. Holland. 2005. Plant Succession on the Mount St. Helen Debris-Avalanche Deposit. Pages 59-74 In Dale, V.H., Swanson, F.J., and Crisafulli, C.M. (editors) *Ecology Responses to the 1980 Eruption of Mount St. Helens*. New York: Springer-Verlag.

Crisafulli, C.M., F.J. Swanson, and V.H. Dale. 2005. Overview of Ecological Responses to the Eruption of Mount St. Helens – 1980-2005. Pages 287-300 In Dale, V.H., Swanson, F.J., and Crisafulli, C.M. (editors) *Ecology Responses to the 1980 Eruption of Mount St. Helens*. New York: Springer-Verlag.

Dale, V.H., C.M. Crisafulli and F.J. Swanson. 2005. 25 years of ecological change at Mount St. Helens. *Science* 308: 961-962.

Landscape Ecology

Gardner, R.H., M.G. Turner, and V.H. Dale. 1989. Predicting across scales: a report on the workshop "Predicting across scales: theory development and testing." *Bulletin of the Ecological Society of America* 70: 153-155.

R.H. Gardner, R.G. O'Neill, M.G. Turner, and V.H. Dale. 1989. Quantifying scale dependent effects of animal movement with simple percolation models. *Landscape Ecology* 3:217-228.

Turner, M.G., R.H. Gardner, and V.H. Dale. 1989. Predicting across scale: theory development and testing. *Landscape Ecology* 3:245-252.

Dale, V.H., R.H. Gardner, and M.G. Turner. 1989. Predicting across scales. *Landscape Ecology* 3:147-152.

Turner, M.G. and Dale, V.H. 1990. Modeling landscape disturbance. In M.G. Turner and R.H. Gardner (ed.) *Quantitative Methods in Landscape Ecology*. Springer-Verlag, New York. pp. 323-351.

Gardner, R.H., V.H. Dale, R.V. O'Neill, and M.G. Turner. 1991. A percolation model of ecological flows. In *Landscape Boundaries: Consequences for Biotic Diversity and Ecological Flows*, F. di Castri and A.J. Hansen (eds.), Springer-Verlag, N.Y., pp. 259-269.

Pearson, S.M., Dale, V.H. and Offerman, H.L. 1994. Fragmentation of habitats used by neotropical migratory birds in southern Appalachians and the neotropics. Proceedings from Symposium on Application of Landscape Concepts to Forest Ecosystem Management at the Society of American Foresters National Convention, Indianapolis, In, Nov 7-10, 1993.

Noon, B.R. and V.H. Dale. 2002. Broad scale ecological science and its applications. Pages 34-52 In (K. Gutzwiller, ed.) *Applying Landscape Ecology in Biological Conservation*. New York: Springer-Verlag.

Dale, V.H., and B.R. Noon. 2004. What is a landscape and how is one studied? In Gucinski, H., Miner, C., and Bittner, B. (editors) *Proceedings Views from the ridge--considerations for planning at the landscape scale*. Gen. Tech. Rep. PNW-GTR-596. Portland, OR U.S. Department of Agriculture. Forest Service, Pacific Northwest Research Station.

Environmental Security

King, W.C. and V. Dale. 2003. What in the World Is worth fighting for? Using models for environmental security. Pages 289-309 In Dale, V.H. (editor) *Ecological Modeling for Resource Management*. New York: Springer-Verlag.

Dale, V.H., S. Bartell, R. Brothers, and J. Sorenson. 2004. Systems approach to environmental security. *EcoHealth* 1:119-123.

EPA Science Advisory Board Reports

U.S. EPA Science Advisory Board. 1995. Ecosystem Management: Imperative for a Dynamic World. Science Advisory Board. U.S. Environmental Protection Agency, Report No. EPA-SAB-EC-95-003, Science Advisory Board, Washington, D.C. Prepared by the Ecological Processes and Effects Committee, Environmental Futures Subcommittee. Chair: Kenneth L. Dickson. Members: William E. Cooper, Virginia Dale, Mark A. Harwell, Robert J. Huggett, Anne McElroy, Frederic K. Pfaender, William H. Smith, Terry F. Young. Science Advisory Board Staff: Stephanie Sanzone

U.S. EPA Science Advisory Board. 1995. Beyond the Horizon: Using Foresight to Protect the Environmental Future.

U.S. EPA Science Advisory Board. 1997. Review of Environmental Goals for America; A review by the Environmental Goals Subcommittee of the Science Advisory Board. U.S. Environmental Protection Agency, Report No. EPA-SAB-EC-97-007, Science Advisory Board, Washington, D.C. Chair: Genevieve M. Matanoski. Members: Stephen L. Brown, Richard J. Bull, Virginia Dale, Mark A. Harwell, James H. Johnson, Jr., Carol A. Johnston, Paul J. Lioy, Morton Lippman, Joe L. Mauderly, Paulette Middleton, Maria T. Morandi, M. Granger Morgan, Ishwar P. Murarka, Barbara Petersen, Emil A. Pfitzer, James Price, Verne A. Ray, James E. Watson, Jr. Liaison: Ernest E. McConnell. Designated Federal Official: John R. Fowle III.

U.S. EPA Science Advisory Board. 2001. Planning for Ecological Risk Assessment: Developing Management Objectives: an SAB Report.

U.S. EPA Science Advisory Board. 2002. An SAB Report: A Framework for Assessing and Reporting on Ecological Condition. Report EPA-SAB-EPEC-02.

U.S. EPA Science Advisory Board 2002. Toward Integrated Environmental Decision Making. Report EPA-SAB-EC-00-011 (see www.epa.gov/sab)

U.S. EPA Science Advisory Board. 2005. Review of Critical Ecosystem Assessment Model (CrEAM). (Chair of Review Panel: V.H. Dale).

U.S. EPA Science Advisory Board. 2006. Review of Geographic Information Screening System Tool (GISST). (Chair of Review Panel: V.H. Dale).

U.S. EPA Science Advisory Board. 2007. Review of Ecological Risk Assessment. (Chair of Review Panel: V.H. Dale).

U.S. EPA Science Advisory Board. 2007. Hypoxia in the Northern Gulf of Mexico: An Update by the EPA Science Advisory Board. (EPA-SAB-08-003) (Chair of Review Panel: V.H. Dale). <http://yosemite.epa.gov/sab/sabproduct.nsf/Search?ReadForm&Query=hypoxia&committee=BOARD>

Reports of the National Research Council

National Research Council, Ecosystems Panel. 2000. Global Change Ecosystems Research. National Academy Press, Washington, D.C.

National Research Council, Ecosystems Panel. 2006. Assessing and Managing Ecological Impacts of Paved Roads. National Academy Press, Washington, D.C.

Reports for the Strategic Environmental Development Program

William D. Goran, Teresa Aden, Harold E. Balbach, Beverly Collins, Virginia Dale, Theresa Davo, Patrick J. Guertin, John Hall, Rose Kress, David Price, and Pete Swiderek , Technical Report, 15 Apr 2002, USACERL, Champaign, IL, Report Number ERDC SR-02-1

Book Reviews

Dale, V.H. 1992. The Amazon: A timeless battleground. *Forum for Applied Research and Public Policy* 7(3): 124-125.

Dale, V.H. 1993. Sustainable land uses in the Amazon. *Ecology* 74:1288.

Dale, V.H. 1993. Sustaining the tropics. *Forum for Applied Research and Public Policy* 9(1):141-142.

Dale, V.H. 2003. Succession. *Ecology* 85(1): 294.

Editorials

Dale, V.H., Barrett, G.W., Carpenter, A.T., Hinkle, C.R., Mitch, W.J., Pitelka, L.F. 2000. ESA's professional certification program: Let's make it work. *Bulletin of the Ecological Society of America* 81(4): 255-257.

Hinkle, C.R., Barrett, G.W., Carpenter, A.T., Dale, V.H., Johnson, W.C., Klopatek, J.M., Mitch, W.J. 2001. ESA's professional certification program: It is working! *Bulletin of the Ecological Society of America* 82(4): 217.

Dale, V.H. 2002. *Environmental Management* fosters enhanced communication through cross disciplinary studies. *Environmental Management* 29:1-2.

General Public

Dale, V.H. 1991. Circles of Death. *Cumberland Journal* 1:16-17, 30.

Dale, V.H. 1992. The recovery of Mount St. Helens. *The World and I*. June: 262-267.

Presentations:

Plenary speaker

U.S. Regional Association of the International Association of Landscape Ecology, East Lansing, Michigan, March 19, 1998

International Association of Landscape Ecology, Colorado, July 1999

EcoSummit 2000, Nova Scotia, Canada, June 18-22, 2000

National Conference on Science, Policy, and the Environment at the National Academy of Sciences, Dec. 7-8, 2000 in Washington, D.C.

Healthy Ecosystems, Healthy People: Linkages between biodiversity, ecosystem health, and human health organized by the International Society for Ecosystem Health (ISEH) and Conservation International, on June 6-10, 2002 in Washington, D.C.

EPA Regional/ORD Science Topic Workshop on Critical Ecosystems, June 17-20, 2002 at Keystone, Colorado

- The American Society of Testing and Materials (ASTM International) Biological Effects and Environmental Fate Committee symposium on *Landscape Ecology and Wildlife Habitat Evaluation Critical information for Ecological Risk Assessment, Land-use Management Activities, and Biodiversity Enhancement Practices*. April 7-9, 2003, Kansas City, KS
- 34th conference of the Ecological Society of Germany, Austria and Switzerland (GfÖ), Eco-complexity and dynamics of the cultural landscape, Giessen, Germany, Sept. 13-17, 2004
- Southern Forestry and Natural Resources GIS Conference, Athens, Georgia, Dec. 16-17, 2004
- First symposium of the Brazilian Chapter of the International Association of Landscape Ecologists, Caxambu, Brazil, Nov. 21, 2005
- Advances in Threat Assessment and Their Application to Forest and Rangeland Management, <http://www.threats.forestencyclopedia.net/-71209#71209>, Boulder, CO, July 2006.
- A landscape design for bioenergy feedstocks, US-China Workshop on Environmental Aspects of Bioenergy Production and Sustainability, Knoxville, TN, September 2007
- Relating the Science of Land Use to Decision Making: Strategies and Opportunities, Transatlantic Land Use Conference, Washington DC, September 2007.
- Success=Balance, 2007 Women in Science Symposium, Knoxville, TN, October 15-16, 2007.
- Conference on Ecological Dimensions of Biofuels, Plenary Talk by VH Dale on "Interactions between biofuel choices and landscape dynamics and land use." Washington, DC, March 10, 2008.
- Workshop on Historical Range of Variability and Climate Change sponsored by the USDA Forest Service and The Nature Conservancy, April 2008, Lansdon, Virginia
- Studying, Modeling and Sense Making of Planet Earth, University of the Aegean, Mytilene, Lesvos, Greece, June 1-6, 2008

Symposia speaker

- Society of American Foresters, Symposium on Forest Models, Portland, Oregon, 1983
- New England Section of the Society of American Foresters, Worcester, Massachusetts, 1984
- International Society of Ecological Modelling Symposium on Plant Growth Models, Fort Collins, Colorado, 1984
- Ecology Society of America Annual Meeting, "Changing Patterns of Landscapes," Ohio State University, August 10-14, 1987
- American Chemical Society, "Biogeochemistry of CO₂ and the Greenhouse Effect," Los Angeles, California, September 25-30, 1988
- Global Natural Resource Monitoring and Assessments: Preparing for the 21st Century," Venice, Italy, September 25-30, 1989.
- International Association of Landscape Ecology, "Forest Management Policy and Forest Landscapes," Ottawa, Canada, July 21-25, 1991
- Ecological Society of America meeting, "Theoretical Approaches for Predicting Spatial Effects in Ecological Systems," San Antonio, Tx., August 4-8, 1991
- Resources for the Future workshop on Integrated Assessments of the Social, Economic and Environmental Consequences of Climate Change", March 1993
- American Association for Geographers symposium on Land Use in Amazonia, San Francisco, Calif., March 29-31, 1994
- Women in Science and Technology Conference, Oak Ridge, Tenn., April 7-8, 1994
- Integrated Assessment: Key Policy Issues, a workshop sponsored by DOE, June 28-29, 1994, Washington, D.C.
- International Society of Ecological Modelling Symposium on Risk Assessment, Knoxville, Tenn., August 7-10, 1994
- Association of Ecosystem Research Centers, November 14, 1994, Washington, D.C.

- Ecological Society of America session on Long-Term Ecological Research, Snowbird, Utah, August 1995.
- International Union of Forest Research Organizations (IUFRO) World Conference International Session on "Modeling Forests in a Complex Environment", Finland, August 6-12, 1995.
- United Nations Symposium on Biodiversity, Jakarta, Indonesia, Nov. 3-8, 1995.
- Workshop on "The Contribution of Adaptive Ecologic, Economic Modeling and Assessment for Sustainable Development in the Role of Stakeholders" jointly funded by the United Nations Environmental Programme (UNEP) and the Scientific Committee on Problems of the Environment (SCOPE), Boston, Mass., August 2-3, 1996.
- Workshop on "Tools to Aid Environmental Decision Making" sponsored by the NSF National Center for Environmental Decision Making Research, Knoxville, Tn, Oct. 29-30, 1996.
- NSF National Center for Ecological Analysis and Synthesis Symposium on "Synthesis in Ecology: Applications, Opportunities and Challenges," Santa Barbara, Cal., Nov. 18-20, 1996.
- Cary Conference on "Use of Ecological Principles," Millbrook, New York, May 5-10, 1997
- Ecological Society of America Symposium on "Advances in Spatial Modeling of Forest Landscape Change," Albuquerque, New Mexico, August 10-14, 1997.
- Strategic Environmental Research and Development Program Annual meeting symposium on Ecosystem Management, December 1997, Washington, D.C.
- Ecological Society of America Symposium on "Landscape Effects of Roads," Baltimore, Maryland, August 6-10, 1998.
- Ecological Society of America Symposium on "Ecological Principles of Land Management and their Implications," Baltimore, Maryland, August 6-10, 1998.
- Policy Forum, Society of American Foresters, Washington, D.C., October 14, 1998.
- American Association for the Advancement of Science, Anaheim, California, Jan. 22-27, 1999.
- American Association of Geographers, Honolulu, Hawaii, March 1999.
- National Conference on Environmental Decision Making, Knoxville, Tn., April 1999.
- Appalachian Laboratory Opening Ceremony Symposium: "Watershed and Landscape Ecology: Future Directions and Opportunities," Frostburg, Maryland, April 12, 1999.
- Women in Science and Technology Conference, April 15-16, 1999, Oak Ridge, Tennessee.
- Symposium on "Microcomputer Applications in Population Modeling and Viability Analysis" at the 4th Microcomputer Applications in Fish and Wildlife Management Conference, Lake Tahoe, NV, October 24-27, 1999.
- Views from the Ridge: Considerations for Planning at the Landscape Scale, sponsored by the Pacific Northwest Research Station, USDA Forest Service, Vancouver, Washington, Nov. 2-4, 1999.
- Symposium on "Urban landscape ecology" at the 15th Annual US Landscape Ecology Symposium, Fort Lauderdale, Fl., April 15-19, 2000.
- Mount St. Helens 20th Anniversary Symposium, Vancouver, Wa, May 15, 2000.
- Global Change in Forests: Interactions among Biodiversity, Climate, and Land Use, Ecological Society of America Symposium, Snowbird, Utah, August 6-10, 2000.
- Workshop on "Land Use in Rural America" Yellowstone National Park, September 21-24, 2000.
- Workshop on "Climate Change and Species Survival: Implications for Conservation Strategies" at the headquarters of The World Conservation Union (IUCN) in Gland, Switzerland.
- Partners Along the Fall-Line: Sandhills Ecology and Ecosystem Management Workshop, Savanna River Ecology Laboratory, Aiken, SC, March 6-7, 2001
- "Top Ten Issues in Landscape Ecology" session at the 16th Annual Symposium on Landscape Ecology, Tempe Arizona, April 2001
- Workshop on "Community-based stewardship" at the August 2001 meeting of the Ecological Society of America in Madison, Wisconsin, August 2001.

- Symposium on “Extreme Event Analysis in Ecology” at the August 2001 meeting of the Ecological Society of America in Madison, Wisconsin, August 2001.
- Workshop on “Land Use” at the August 2001 meeting of the Ecological Society of America in Madison, Wisconsin, August 2001.
- Symposium on “Land Use” at the August 2002 meeting of the Ecological Society of America in Tucson, AR, August 2002.
- Pardee Symposium on “Geologic and Ecologic Responses to Landscape Disturbances” at the Geological Society of America, October 29, 2002 in Denver, Colorado.
- Symposium on Research in the region around Columbus, Georgia, October 28, 2002 in Columbus, GA.
- SERDP Symposium, December 2003, Washington, D.C.
- Symposium on Ecological Recovery at Mount St. Helens, August 2004 meeting of the Ecological Society of America, Portland, OR.
- Session on “Biodiversity Indicators and the 2010 target: scientific challenges” at the conference on “Biodiversity: Science and Governance” sponsored by UNESCO, January 24-30, 2005, Paris, France.
- Symposium on Ecological Indicators, Ecological Society of America in Montreal, Canada, August 2005.
- Workshop on Valuation of Ecosystem Services in Agriculture, Kalamazoo, MI, October 27-28, 2005.
- Hewlitt Workshop on Effects of Climate Change, Washington, D.C., May 8 and Nov 2, 2006
- The Tennessee Nature Conservancy Workshop on the Cumberland Plateau and Mountains, Nashville, Tn, June 17-18, 2006
- SERDP Symposium, November 2006
- Overcoming Barriers to Effective Research Collaboration, All Scientists Team meeting of the Southern Research Station of the USDA Forest Service, January 2007
- Success = Balance, All Scientists Team meeting of the Southern Research Station of the USDA Forest Service, January 2007
- A systems perspective on climate change, National Leader Team of the USDA Forest Service, New Orleans, April 2007.
- Landscape Genetics symposium at the International Association for Landscape Ecology in The Netherlands, July 2007.
- Conference on Biomass 2008: Fueling Our Future conference, Presentation by VH Dale on “Designing Proactive Bioenergy Choices in a Landscape Context.” Alexandria, Virginia, April 17-18, 2008.
- Biomass 2009, Washington DC. March 2009
- US Chapter of the International Association for Landscape Ecology, Snowbird Utah, April 2009.
- Paper presented by Don Hodges developed by VH Dale, ML Tharp, KO Lannon and DG Hodges titled "Modeling Transient Response of Forests to Climate Change" at the Annual meeting of the Southern Appalachian Man and the Biosphere (SAMAB) in Asheville, NC, on November 17-19, 2009.

Testimony

- Adams, V.D. 1982. Testimony. pp. 185-188. In Joint hearings before the Subcommittee on Forests, Family Farms and Energy of the Committee on Agriculture and the Subcommittee on Public Lands and National Parks of the Committee on Interior and Insular Affairs, U.S. House of Representatives, Ninety-seventh Congress, March 11, 1982. U.S. Government Printing Office, Washington, D.C. 510 p.

- U.S. Senate and House of Representatives Joint Hearings before the Subcommittee on Forests Family Farms and Energy and the Subcommittee on Public Lands and National Parks, Washington, D.C., 1982
- Washington Power System Supply Board, Seattle, Washington, 1982.
- U.S. House of Representatives Resources Subcommittee Hearing on Forests and Forest Health, Washington, D.C. March 16, 1999.

Invited seminars

- International Congress of Systematists and Evolutionary Biologists, Vancouver, Canada, 1980
- Pacific Lutheran University, Tacoma, Washington, 1981
- Oregon State University, Corvallis, Oregon, 1981, 1982, 1983
- Evergreen State College, Olympia, Washington, 1982
- University of Puget Sound, Tacoma, Washington, 1982
- Environmental Sciences Division, Oak Ridge National Laboratory, 1983
- Material Effects Research and Assessment Activities Review Meeting of the National Acid Precipitation Assessment Program, Burlington, Vermont, 1984
- Forest Service Station, Raleigh, North Carolina, 1985
- School of Forestry and Wildlife Resources, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 1985
- Southern Forest Experiment Station, Asheville, North Carolina, 1985
- EPA Acid Deposition Assessment Staff, Washington, D.C., 1985
- Northeastern Forest Service Experiment Station, Broomall, Pennsylvania, 1985
- Workshop on "Problems and opportunities in modeling the effects of atmospheric deposition on forests," Charlottesville, Virginia, 1985
- Second Annual Acid Rain Conference for the Southern Appalachians, Gatlinburg, Tennessee, 1985
- Association of Southern University Biometricians 1985 Workshop on "Modeling the Acid Rain Impact", Chapel Hill, North Carolina, 1985
- School of Forestry, University of Tennessee, Knoxville, Tennessee, 1986
- Third Annual Acid Rain Conference for the Southern Appalachians, Gatlinburg, Tennessee, 1986
- Economics of Eastern Hardwood Management, University Park, Pennsylvania, 1987
- University of Tennessee, Knoxville, April 20, 1987, April 25, 1991; October 15, 1991, October 25, 1991
- Overview of research on scaling issues to Erich Bretthauer, Acting Assistant Administrator, and others, Environmental Protection Agency, Washington, D.C., February 8, 1989
- Seminar for Brazilian Environmental and Agro-Forestry Specialists, Sponsored by U.S.AID and Partners of the America, University of Tennessee, Knoxville, Tn., November 9, 1989
- Workshop on "Designing an Acid Deposition Policy Model for South-East Asia," Bangkok, Thailand, November 13-17, 1989
- High School Honors Program, ORNL, July 17, 1990
- National Research Council's Committee on "Sustainable Agriculture in the Human Tropics", February 19-20, 1991
- Walker Branch Symposium, Oak Ridge, Tn., March 1991 and 1992
- Department of Environment, State of Rondonia, Porto Velho, Rondonia, Brazil, August 1991.
- Department of Geographical Services, Rio de Janeiro, Brazil August 1991.
- Appalachian State University, January 1992.
- USDA Forest Service, Washington, D.C., April 1992
- Oak Ridge Management seminar, May 1992

- American Society for Photogrammetry and Remote Sensing and the American Congress on Surveying and Mapping and Resource Technology, Washington, D.C., August 3-7, 1992
- International Association of Impact Assessment, Washington, D.C., August 19-22, 1992
- Sand County Foundation, Milwaukee, Wi, Sept. 16-17, 1992
- Oak Ridge Science and Engineering Research Semester Series: November 1992, February 1993, November 1993, October 1997
- Workshop on "USDA Forest Service's Global Change Program", U.S. Forest Service, Delaware, Ohio, Nov. 16-18, 1992
- Department of Environment, State of Amazonia, Manaus, Amazonia, Brazil, August 1993.
- Sand County Foundation, Greenbay, Wi, Jan. 30-31, 1994
- Sustainable Biosphere Initiative workshop on "Vulnerability Studies," Raleigh, N.C., March 8-11, 1994
- Forest Service meeting on Modeling Climate Change Impacts, New Hampshire, October 1994.
- Strategic Environmental Research and Development Program review by Science Advisory Board: January 1995 in San Francisco, California; June 2001 in Washington, DC; and September 2001 in Falmouth, Massachusetts
- Strategic Environmental Research and Development Program Science Meeting, May 1995 and 1996, Fort Belvoir, Virginia and May 14 and May 28, 1997 and May 20, 1998 in Washington, DC
- University of Tennessee, October 1995, Knoxville, Tn.
- Utah State University, March 1997, Logan, Utah.
- Montana State University, November 1998, Bozeman, Montana.
- Fort Benning, Georgia, January 14, 1999.
- USDA Committee of Scientist presentation to the Forest Service, March 17, 1999, Washington, D.C.
- Science Advisory Board of the Strategic Environmental Research and Development Program, Washington, D.C. October 20, 1999.
- The Environmental Law Institute Senior Ecologist seminar, May 11, 2000, Washington, DC.
- The U.S. Environmental Protection Agency's Office of Water seminar, May 11, 2000, Washington, DC.
- Ohio State University, November 2, 2000
- Virginia Polytechnic Institute, Blacksburg, Virginia, April 2001
- University of Illinois in Chicago, April 2001
- Panama Canal Authority, Panama City, Panama, April 2001 and March 2002
- US Agency for International Development, Panama City, Panama, March 2002
- University of Washington, School of Forestry, Seattle, Wa., March 2003
- University of Michigan, School of Environment and Natural Resources, Ann Arbor, Mi., March 2003
- New York Botanical Garden, May 2003
- University of Queensland, July 2003
- Forestry Department, University of Tennessee, February 2004.
- Computer Science and Ecology and Evolutionary Biology, University of Tennessee, February 2005
- Workshop on Climate Change Impacts at a Regional Scale: How good is the science? October 3 - 4, 2005, Oak Ridge National Laboratory
- "Road Ecology: Science and Solutions" lead-in lecture for Summer School organised by the Complutense University in El Escorial: Environmental Treatment of Infrastructures for Transport. Challenges, Opportunities and Solutions for a More Efficient and Profitable Environmental Integration, July 16-20, 2007 in Spain

Contributed Presentations

Northwest Scientific Association annual meeting, 1979, 1980, 1981, 1982, 1983
 Ecological Society of America annual meetings, 1979, 1980, 1981, 1982, 1984, 1985, 1986, 1987, 1988, 1989, 1994, 1995, 1996
 Mount St. Helens: One Year Later Symposium, Cheney, Washington, 1981
 Mount St. Helens: Five Years Later Symposium, Cheney, Washington, 1985
 Landscape Ecology Symposium, 1986, 1987, 1989, 1993, 2002
 Annual meeting of the American Society of Zoologists, Nashville, Tennessee, 1986
 Tennessee Technological State University, Cookeville, Tennessee, 1988
 Global Natural Resource Monitoring and Assessments: Preparing for the 21st Century, Venice, Italy, September 25-30, 1989. Organized by IUFRO and FAO, 1989
 Sixteenth Annual Natural Areas Conference, Knoxville, Tn., October 17-19, 1989
 Sixth Annual Gatlinburg Acid Rain Conference, Gatlinburg, Tn., October 30-31, 1989
 Forest Service workshop on "Regional and National Models for Global Change," Delaware, Ohio, November 16-18, 1992
 National Center for Environmental Decision-Making Research Conference on Environmental Decision Making, Knoxville, Tennessee, May 1998.
 15th Central Hardwood Forest Conference, Knoxville, TN, February 27 - March 1, 2006.

Posters presented:

Ecological Society of America meeting in Toronto, Canada, August 6-10, 1989.
 American Society of Agronomy meeting in Las Vegas, Nevada, October 15-20, 1989.
 ARC-INFO annual meeting, California, May, 1990, 2005, AND 2006.
 Ecological Society of America meeting in Albuquerque, New Mexico, August 10-14, 1997.
 Partners in Environmental Technology 98 Technical Symposium and Workshop, 1996, 1998, 2000, 2002, 2003, 2004, and 2005 in Washington, DC.
 Ecological Society of America meeting in Madison, WI, August 2001.

Presentations to general public

Seattle Zoological Society, Seattle, Wa. 1982
 Washington Native Plant Society, Seattle and Bellingham, Wa. 1982
 East Tennessee Wood Workers, Knoxville, Tn. 1989
 First Presbyterian Church Adult Group, Oak Ridge, Tn. 1990
 Cadet Girl Scout Troops of Oak Ridge, Tn. 1992, 1993
 Rotary Club, Oak Ridge, Tn. 1992
 Elementary and high school classes: > 40 talks (1980-present)
 Oak Ridge High School Environmental Fair, 1992.
 Girl Scouts of Knoxville, 1993
 Harpeth Hall High School, Celebrating Women in Science, Nashville, Tn. 1994
 University of Tennessee, October 1995
 Knox County Inservice program for mathematics teachers, keynote speaker, August 1998
 American Museum of Science and Energy, Earth Day Celebration, April 22, 1999
 Anderson/Roane County Professional Society, June 9, 1999
 Oak Ridge Unitarian Universalist Church, July 11, 1999
 University of Tennessee Learning Center, Nov. 18, 1999
 Mount St. Helens 20th anniversary, Portland Oregon, May 2000
 Tennessee Citizens for Wilderness Planning, Rugby, TN, October 2005

Meetings attended (in addition to those at which presentations were given):

- Environmental Protection Agency workshop on forest decline, Raleigh, North Carolina, 1984
 German-American scientific exchange on forest damage assessment, Asheville, North Carolina, 1984
 Conference on Management of International Biosphere Reserves, Gatlinburg, Tennessee, 1984
 EPA Sponsored Workshop on Integrated Assessment Methodology, Washington, D.C., 1984
 Eleventh Annual Scientific Research Meeting, National Park Service, Gatlinburg, Tennessee, 1985
 IUFRO Conference on plant physiology, Knoxville, Tennessee, 1985
 Workshop on Array and Parallel Processing in Landscape Dynamics, Fort Collins, Colorado, 1986
 Workshop on "Biological Response to Environmental Change" October 18-21, Woods Hole, Massachusetts, 1987
 Briefing on the Long Term Ecological Research (LTER) program of the National Science Foundation, Washington, D.C., 1987
 NSF sponsored workshop on "Forest Succession and Landscape History", Durham, North Carolina. January 28-31, 1988
 Workshop on "Gypsy moth: bracing for the impact," sponsored by the East Tennessee Chapter of the Society of American Foresters, Knoxville, Tennessee, March 10, 1989
 Workshop on "Land Use Changes in South and South-east Asia," San Juan, Puerto Rico, December 10-13, 1989
 Workshop on "Public Participation in the National Forests," Knoxville, TN July 10, 1990
 Workshop on "Modeling Global Climate Change" sponsored by the U.S. Forest Service, Tucson, Arizona, Nov. 13-15, 1990
 Review of land use research sponsored by DOE, Urbana, Il., Feb. 11, 1991
 U.S. Forest Service workshop on Modeling Global Change, Tucson, Ar., Nov. 13-15, 1990
 Technologies for a Greenhouse Constrained Society, Oak Ridge, Tn., June 11-13, 1991
 Workshop on "Forest Ecosystem Conceptual Models" U.S. Forest Service, Delaware, Ohio, June 2-3, 1992
 Cary Conference on Integrated Regional Models, Millbrook, New York, Oct. 4-8, 1992
 Forest Service Round-table on Ecosystem Management of Forest Plans, Rhinelander, Wi, Sept. 20-23, 1992
 Workshop on integrated assessments, Pennsylvania State University, Oct. 19-21, 1992
 Forest Policy Center Workshop on Forest Ecosystem Management at the Landscape Level, Oak Ridge, Tennessee, March 24-25, 1993
 Opportunities for Future Cooperation in Achieving Sustainable Development in Amazonia and Appalachia, Knoxville, Tennessee, May 31- June 2, 1994
 U.S.-Japan Workshop on Integrated Assessment, Honolulu, Hawaii, October 1994.
 SERDP coordination meeting, Fort Steward, Georgia, January 1997.
 Sigma Xi National Meeting, New Orleans, La, March 6-9, 1997.
 Workshop on "Criteria and Indicators for Monitoring Biodiversity," Bogar, Indonesia, April 21-25, 1997.
 Workshop on Information Infrastructure for environmental decision making, Gatlinburg, Tn., April 29-30, 1997.
 Workshop on Ecosystem Management, sponsored by the Strategic Environmental Research and Development Program, Arlington, Virginia, June 2-5, 1997
 SERDP Symposium, Washington D.C., December 1997, 1998 and 2000.
 SERDP Ecosystem Management Project, Eglin Air Force Base, February 9-11, 1998

USDA Committee of Scientist meetings in Chicago (December 1997), Denver (January 22-23, 1998), Seattle (February 12-13, 1998), Atlanta (February 24-25, 1998), Boston (March 31-April 1, 1998), Albuquerque (April 14-15, 1998), Missoula (April 22-23, 1998), Boulder (May 27-29), Washington, D.C. (July 17, 1998), and Washington, D.C. (March 15-17, 1999).

National Research Council Ecosystems Committee, Portland, Or., December 1997

SERDP Ecosystem Management Project, Fort Benning, Georgia, June 1998; Washington D.C. August 1998; Fort Benning, Georgia, November 2000.

National Research Council Ecosystems Committee, Baltimore, MD, July 13-15 1998.

Science Review of The Nature Conservancy, National Center for Ecological Analysis and Synthesis, Santa Barbara, Ca., February 2001

Global Change Subcommittee of DOE's Biological and Environmental Research Advisory Committee, Washington, DC, March 26-27, 2001

EPA Science Advisory Board Ecological Processes and Effects Committee, July 2001, February 2003; June 2004; December 2005.

Koala Habitat Protection Workshop, Noosa, Australia, July 2003.

Science Advisory Committee of the Grand Canyon Monitoring and Research Center, July 31, 2001 in Denver, CO; Sept. 29 to Oct. 7, 2001 in the Grand Canyon, May 17-18 in Fort Collins, Co.

U.S. National Committee on the Scientific Committee on Problems of the Environment (SCOPE), Washington, DC March 2002

National Research Council Committee on Ecological Impacts of Road Density, Los Angeles in June 2002 and Seattle, WA in September 2002

Department of Energy Review of Biosphere II, Tucson, AR and Boulder, CO, January 2003

EPA Science Advisory Board Executive meetings, January 2003, September and December 2004, July and December 2005, June 2006.

Review of EPA's Draft Report on the Environment, Washington, DC, March 2003.

Workshop on Ecological Dimensions of Biofuels, Washington, DC, March 11-12, 2008.

Classes completed

ARC/INFO training, October 1989

Process communication, June 1993

DPL Decision analysis training, October 1993

Project Management, February 1994

Presenting data and information, March 2005

Media Coverage of Dale's Work

Television

Good Morning America - August 1983

Local Knoxville, Tn. station - August 1994, September 2004

Local East Lansing, Mi. station - March 1998

Local Portland, Oregon station - May 2000

Video

Oak Ridge National Laboratory visitor center - filmed 1996

Gateway Welcome Center, Knoxville - filmed 1998

Michigan State Department of Natural Resources - filmed 1998

Radio

KPLU for Public Radio, Tacoma Washington - August 1982

KUOW for Public Radio, Seattle, Washington - May 1983

Radio interview, Michigan public radio, 1989

Earth and Sky (National Public Radio) - May 1996
 KPOO, Portland, Oregon - May 2000
 WUOT, Knoxville public radio, May 2005
 USA Radio Network, National Syndicated News, May 18, 2005
 KNX-AM, Los Angeles, My 18, 2005
 WTAG-AM, Boston, May 16, 2005
 KPQ-AM, Seattle/Tacoma, May 18, 2005
 WCXE-AM, Minneapolis, May 8, 2005
 KAHI-AM, Sacramento, May 18, 2005
 WLAC-AM, Nashville, May 18, 2005
 KCMN-AM, Colorado Springs, May 18, 2005
 KVEC-AM, San Luis Obispo, May 18, 2005
 Garden Guys radio show (www.garden-guys.com), December 19, 2010

Newspaper

Seattle Times - numerous articles, 1980 to 1984, 1999, 2005
 Oregonian - front page article; 1983, other articles 1982-1984 and 1998
 Arizona Star - August 1981, March 1999
 Oak Ridger - numerous articles, 1984 -present
 Knoxville News Sentinel - numerous articles, 1984-present
 The New York Times - October 8, 1991; May 16, 2000
 Washington Post - March 1999; May 2005
 USA Today - March 1999
 Newsday - May 2, 2000
 The Columbian, Vancouver, Washington - May 16, 2000
 The Chicago Sun Times - May 17, 2000
 The Salt Lake Tribune - August 8, 2000
 Noosa Journal Property Review - July 2003
 Sunshine Coast Daily, Noosa, Australia - July 2003

Scientific Journals

Environmental Science and Technology - December 1, 1998
 Science - April 1989 and March 1999
 National Defense - February 2004
 Smithsonian - May 2005
 Bulletin of the Ecological Society of America - July 2005

Newsletter

Strategic Environmental Research and Development Program Information Bulletin, April 1999, June 2001, and September 2002
 Oak Ridge National Laboratory Reporter. Dec. 2005, No. 73. Plan for the Cumberlandds: Virginia Dale, Nature Conservancy team up to chart environmental course for plateau, range

Web Sites

www.Sciencenow.org Feb 2, 2000 "The long reach of asphalt."
<http://www.esa.sdsc.edu/esalanduse.htm/> The Report of the Land Use Committee of the Ecological Society of America
<http://www.fs.fed.us/news/science/> The Committee of Scientist Report for the Secretary of Agriculture
<http://www.esd.ornl.gov/programs/SERDP/> Report for the Strategic Environmental Research and Development Program: "Ecological Models Support Land Use Decisions"
 ORNL's Center for BioEnergy Sustainability <http://www.ornl.gov/sci/besd/cbes.shtml>