

TISCHA A. MUÑOZ-ERICKSON
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RESEARCH INTERESTS

Human-environment interactions; Adaptive governance; Participatory decision-making; Science/policy interactions; Resilience/Vulnerability; Environmental values/perceptions; Environmental Policy; Political Ecology; Environmental Justice; Sustainability indicators and assessment

Geographic Areas: United States (Arizona), Puerto Rico, Costa Rica

EDUCATION

ARIZONA STATE UNIVERSITY

Ph.D. in Sustainability, present

Focus: Policy and Governance

Minor: Geography

NORTHERN ARIZONA UNIVERSITY

M.S. in Environmental Sciences and Policy, 2004

With Distinction

Thesis: "Evaluating the Ecological and Social Outcomes of Collaborative Management: Ecosystem Health Indicators for Monitoring Effectiveness"

PRESCOTT COLLEGE

B.A. in Environmental Studies, 1999

With Distinction

Emphasis: Applied Ecology Minor: Environmental Education

Senior Thesis: "An Evaluation of Ecosystem Health for a Private Property in San Salvador, Puerto Rico"

HONORS AND AWARDS

National Science Foundation, IGERT Fellowship in Urban Ecology, (Arizona State University, 2006)

School of Geographical Sciences, Departmental Grant to attend Liphe 4 Summer Program on Integrated and Participatory Analysis for Sustainability (Arizona State University, 2006)

EPA's P3 Award: a Student Design Competition for Sustainability (Northern Arizona University, 2004)

US Society for Ecological Economics, Meadows Award for Best Abstract (2004)

Northern Arizona University Nominee for the Western Association of Graduate Schools Distinguished Master's Thesis Award (2004)

T and E, Inc. grant (Northern Arizona University, 2004)

Research featured in NAU Today (Northern Arizona University, 2001)

Chosen by two academic departments to present Senior Thesis at Baccalaureate Ceremony (Prescott College, 1999)

Golden Key National Honor Society (Michigan State University, 1996)

"Freshman of the Year Award" (Michigan State University, 1995)

RESEARCH EXPERIENCE

2004-2006 Project Manager / IMfoS Project, Northern Arizona University

Managed and coordinated research development and stakeholder involvement for the Integrated Monitoring for Sustainability (IMfoS) Project, with the objective of implementing sustainability indicators to evaluate outcomes of managed ecosystems.

2004-2006 Research Associate / ForestERA Project, Northern Arizona University

Designed and implemented social science methodologies (Q methodology) to evaluate stakeholder attitudes and preferences toward forest restoration and evaluate the participatory process used by the Forest Ecosystem Restoration Analysis Project to guide forest restoration scenarios.

2001-2004 Graduate Research Assistant, Northern Arizona University

Developed the Holistic Ecosystem Health Indicator (HEHI), to evaluate ecological and social outcomes of collaborative approaches to ecosystem management.

TEACHING EXPERIENCE

2000 Costa Rica and the New Millennium: Studies on Holistic Ecosystem Management in Developing Nations (field course), Teaching Assistant, Prescott College

2000 Tropical Biology: the Natural History of Costa Rica (field course), Teaching Assistant, Prescott College

2000 Principles of Ecological Economics (undergraduate seminar), Teaching Assistant, Prescott College

1996 Ecology Laboratory (300-level course), Assistant to the Teacher Assistant, Michigan State University

OTHER WORK EXPERIENCE

2000-2001 Program Intern, Greater Flagstaff Forest Partnership

2000 General Development Intern, Grand Canyon Trust

1995-1997 Team Leader, AMERICORPS, Environmental Problem Solving in Lansing

PEER-REVIEWED PUBLICATIONS

Muñoz-Erickson, T.A., B.J. Aguilar-Gonzalez and T.D. Sisk. 2007. Linking ecosystem health indicators and collaborative management: a systematic framework to evaluate ecological and social outcomes. *Ecology and Society* 12 (2).

Tilt, W., C. Conley, M. James, J. C. Lynn, **T.A. Muñoz-Erickson**, and P. Warren. *In press*. Creating successful collaborations in the West: lessons from the field. In Proceedings of the 8th Biennial Conference on the Colorado Plateau. Van Riper III, C. and M. Sogee (eds.). University of Arizona Press. Tucson, Arizona.

Muñoz-Erickson, T.A. and J. Declat Barreto. "Puerto Rican Studies". Entry. *In press*. Latinos and Latinas in US History and Culture: An Encyclopedia.

Declat Barreto, J. and **T.A. Muñoz-Erickson**. "The National Puerto Rican Coalition". Entry. *In press*. Latinos and Latinas in US History and Culture: An Encyclopedia

Muñoz-Erickson, T.A., M.R. Loeser, and B.J. Aguilar-González. 2004. Identifying Indicators of Ecosystem Health for a Semiarid Ecosystem: A Conceptual Approach. In *The Colorado Plateau: Cultural, Biological and Physical Research*. Van Riper III, C. and Cole, K.L. (eds.) University of Arizona Press. Tucson, Arizona.

Muñoz-Erickson, T.A., B.J. Aguilar-Gonzalez, T.D. Sisk, and M. R. Loeser. *In review*. A Framework to Monitor Ecological and Social Outcomes of Collaborative-Management: Development and Implementation with a Northern Arizona Collaborative Group. *Environmental Management*

Larson, K., A. Wutich, **T. A. Muñoz-Erickson**, S. Harlan. *In preparation*. The Influence of Culture on Ecological Concern among Latinos in the Desert Southwest

Sisk, T.D. , B. Dickson, J. Dryzek, H. Hampton, **T. A. Muñoz-Erickson**, S. Niemeyer J. Prather, Y. Xu, D. Schlosberg. *In preparation*. Ecological discourse and participatory science: Public engagement reduces conflict in forest policy development.

OTHER PUBLICATIONS AND REPORTS

Fernández-Giménez, M., B. Aguilar-González, **T. A. Muñoz-Erickson**, and C. G. Curtin. 2006. Assessing the Adaptive Capacity of Collaboratively Managed Rangelands: A Test of the Concept and Comparison of 3 Rangeland CBCs. *Journal of the Community-based Collaborative Research Consortium*. [online] URL: <http://www.cbcr.org/php-bin/news/showArticle.php?id=75>

Muñoz-Erickson, T.A., B.J. Aguilar-González, M.R. Loeser and T. D. Sisk. 2006. Assessing the Effectiveness of the Holistic Ecosystem Health Indicator (HEHI) as a Monitoring Tool to Assess the Adaptive Capacity of Community-based Collaboratives. *Journal of the Community-based Collaborative Research Consortium*. [online] URL: <http://www.cbcr.org/php-bin/news/showArticle.php?id=75>

Muñoz-Erickson, T., B. Aguilar-González, T.D. Sisk, M. R. Loeser and A. Richey. 2007. The Diablo Trust-Integrated Monitoring for Sustainability (IMfoS) Project. Final Report to the Diablo Trust. Sisk Lab, Northern Arizona University and Prescott College.

Sisk, T.D., H.M. Hampton, J. Prather, E.N. Aumack, Y. Xu, M.R. Loeser, **T. Muñoz-Erickson**, B. Dickson, and J. Palumbo. 2004. Forest Ecological Restoration Analysis (ForestERA) Project Report, 2002 – 2004. Center for Environmental Sciences and Education, Northern Arizona University.

Sisk, T.D., H.M. Hampton, Y. Xu, B. Dickson, **T. Muñoz-Erickson**, J. Palumbo, J. Rundal, and J. Anderson. Forest Ecosystem Restoration Analysis (ForestERA) Project. 2006. *North-Central New Mexico Landscape Assessment Data Atlas*. Center for Environmental Sciences and Education, Northern Arizona University.

Muñoz-Erickson, T.A. and B.J. Aguilar-Gonzalez. 2003. The Use of Ecosystem Health Indicators for Evaluating Ecological and Social Outcomes of the Collaborative Approach to Management: the Case Study of the Diablo Trust. Prepared for the National Community-based Collaborative Research Consortium Workshop. Snowbird, Utah. *Online Journal of the Community-based Collaborative Research Consortium* (<http://www.cbcr.org/2003speakerpapers/Munoz%20and%20Aguilar%5B1%5D.v1%20for%20web%20site.pdf>)

Muñoz, T.A., M. VanHorne and C. Edminster. 2001. Grand Canyon Forest Partnership Research Guide. Grand Canyon Trust. Flagstaff, AZ 86001

REVIEWS

Fernández-Giménez, M. and Heidi Ballard. *Forthcoming*. How CBCs Learn: Ecological Monitoring and Adaptive Management. Chapter in *Effective Collaboration in Environmental Change by the Community-based Collaborative Research Consortium*. Reviewer and text contributor.

PRESENTATIONS

Zimmerman, J., K. Hein, **T. Muñoz Erickson**, T. A. Cowl, A. González-Cabán, A. P. Covich, F. N. Scatena, C. A.S. Hall and J. B. Loomis. 2007. Integrating the Human Factor into the Luquillo Long-Term Ecological Research Program: Past, Present, and Future. Association of Tropical Biology and Conservation. *Paper presentation*.

Sisk, T.D. , B. Dickson, J. Dryzek, H. Hampton, **T. A. Muñoz-Erickson**, S. Niemeyer J. Prather, Y. Xu, D. Schlosberg. 2007. Ecological discourse and participatory science: Public engagement reduces conflict in forest policy development. Ecological Society of America. *Paper presentation*

Muñoz-Erickson, T. A. 2007. Incorporating Social Elements into the Long Term Ecological Research Program: Institutional Lessons from the LTER Network. Central Arizona Project LTER. Arizona State University, Arizona. *Poster presentation*.

Muñoz-Erickson, T. A. 2006. Understanding Social Dimensions of Ecological Change in the Luquillo LTER: Opportunities for Engaging the Social Sciences. LTER All Scientists Meeting. Estes Park, Colorado. *Poster presentation*.

Muñoz-Erickson, T. A , Aguilar-Gonzalez B., Loeser, M. and T.D. Sisk. 2005. Assessing the Effectiveness of the Holistic Ecosystem Health Indicator (HEHI) as a Monitoring Tool to Assess the Adaptive Capacity of Community-based Collaboratives. *Paper presentation*. Community-based Collaborative Research Consortium National Workshop. Sedona, Arizona.

Schlosberg, D., **T. A. Muñoz-Erickson**, T. D. Sisk, S. Niemeyer and J. Dryzek. 2005. What Does Collaboration Change? A Study of Participant Values, Policy Positions, and Opinions of Others on Forest Restoration Issues in Northern New Mexico. *Paper presentation*. Community-based Collaborative Research Consortium Meeting National Workshop. Sedona, Arizona.

Muñoz-Erickson, T.A , T. D. Sisk, M. Loeser, B. Aguilar-Gonzalez, T. Crews, and J. Palumbo. 2005 Grassland Research and Monitoring: Fostering Collaborative Capacity through Science. Panel on Creating Successful Collaboration for Rangeland Conservation by the Ecological Monitoring and Assessment Program and Foundation. Eight Biennial Conference of Research on the Colorado Plateau Proceedings. Flagstaff, AZ. *Panel presentation*

Muñoz-Erickson, T.A , Loeser, M., Aguilar-Gonzalez B. and T.D. Sisk. 2005. A Tool for Sustainability: Evaluating Outcomes with Indicators of Ecosystem Health. Environmental Protection Agency P3 Award Competition. National Mall, Washington D.C. *Poster presentation*.

Aguilar-González, B., **Muñoz-Erickson, T.**, and Bayha, J. 2004. Interdisciplinary Indicators, Ecosystem Health and Participatory Management: Further Evolution and Case Study Comparisons Using The HEHI in Managed Ecosystems 8th Biennial Scientific Conference of the International Society for Ecological Economics. *Paper presentation*

Muñoz-Erickson, T.A and B., Aguilar-Gonzalez. 2004. Linking ecosystem health indicators and collaborative-based management: a case study on the resilience of a rangeland ecosystem in Northern Arizona. **8th Biennial Scientific Conference of the International Society for Ecological Economics**. Montreal, Canada. *Paper presentation*

Muñoz-Erickson, T.A, Ostergren, D., Aguilar-Gonzalez, B. and T.D. Sisk. 2004. Integrating ecological and social measures to evaluate collaboration: a systematic framework. Western Social Science Association. Salt Lake City, Utah. *Paper presentation*

Muñoz-Erickson, T.A , Loeser, M., Aguilar-Gonzalez B. and T.D. Sisk. 2004. Assessing ecosystem health: a framework for integrating information across multiple scales. International Association for Landscape Ecology. Las Vegas. *Poster presentation*

Muñoz-Erickson, T.A. 2004. Quantifying sustainability: the use of ecosystem health indicators to evaluate the effectiveness of collaborative management. Merriam Powell Seminar. Northern Arizona University, Flagstaff, Arizona. *Paper presentation*.

Muñoz-Erickson, T.A , Aguilar-Gonzalez B., Sisk T. D. and M. Loeser. 2003. An integrated evaluation framework to assess the sustainability of a semi arid grassland system managed through a collaborative approach. 7th Biennial Conference on the Colorado Plateau. Flagstaff, Arizona. *Paper presentation*

Loeser, M.R., Sisk, T.D., Crews, T. E. and **T.A. Munoz-Erickson**. 2003. Grazing for a greener future: Assessment of alternative grazing strategies in desert grasslands. Sixth Biennial Conference of Research on the Colorado Plateau Proceedings. Flagstaff, AZ. *Paper presentation*

Muñoz-Erickson, T.A. and B. Aguilar-Gonzalez. 2003. The use of ecosystem health indicators for evaluating ecological and social outcomes of the collaborative approach to management: the case study of the Diablo Trust. National Workshop on "Evaluating Methods and Environmental Outcomes of Community-based Collaborative Processes", Community-based Collaborative Research Consortium. Snowbird, Utah. *Paper presentation*

Muñoz-Erickson, T.A. and T.D. Sisk. 2003. The use of ecosystem health indicators in the assessment, monitoring and evaluation of collaborative-based management approaches to restoration. Southwest Fire Initiative. Flagstaff, Arizona. *Poster presentation*

Aguilar-Gonzalez, B. and **T.A. Munoz-Erickson**. 2001. Interdisciplinary indicators, ecosystem health and participatory management: further evolution and case study comparisons using the HEHI in managed ecosystems. International Conference on Ecosystem Health. Washington D.C. *Paper presentation*

INVITED TALKS AND LECTURES

Muñoz-Erickson, T.A. 2006. Toward environmental social science: integrative research in the Luquillo LTER. Luquillo LTER Annual Meeting. University of Puerto Rico. San Juan, PR.

Muñoz-Erickson, T.A. 2004. Evaluating the ecological and social outcomes of collaborative management: the Holistic Ecosystem Health Indicator for monitoring effectiveness. Community-based Collaborative Research Consortium Evaluation Workshop. Summit County, CO.

Muñoz-Erickson, T.A. 2004. Participant in Expert Workshop on Evaluating Outcomes of Community-based Collaboratives Community-based Collaborative Research Consortium. Richmond, VA.

Muñoz-Erickson, T.A. 2005. Presenter at a Diablo Trust monthly meeting on research and monitoring issues and approaches

Muñoz-Erickson, T.A. 2001-2005. Field trip facilitator for Prescott College Environmental Law course on collaborative approaches to land management

Muñoz-Erickson, T.A. 2001. Field trip facilitator for a Prescott College Ecological Economics course on the alternative economic valuation of small diameter timber for ponderosa pine forest restoration

Muñoz-Erickson, T.A. 1999. Talk to 9th grade environmental class on current environmental issues in Puerto Rico and the conservation field. Academia San Jose

RESEARCH GRANTS

Co-Principal Investigator: Proposal titled "Assessing the Effectiveness of the Holistic Ecosystem Health Indicator (HEHI) as a Monitoring Tool to Evaluate the Adaptive Capacity of Community-Based Collaboratives". 2004. Community-based Collaborative Research Consortium Grant - \$14,998 (Northern Arizona University)

Co-Principal Investigator: Proposal titled, "Assessing the Adaptive Capacity of Collaboratively Managed Rangeland Ecosystems". 2004. Community-based Collaborative Research Consortium Grant - \$18,380 (Colorado State University, 2004)

SPECIALIZED COURSES AND WORKSHOPS

2007 Resilience Alliance, Reviewer for the Resilience Management Practitioner Workbook

2005 Modeling for Environmental Outcomes, Systems Dynamic Modeling (Northern Arizona University)

2006 Liphe4 Summer School on "Participatory and Analytical Tools for Sustainability" (Spain)

PROFESSIONAL AFFILIATIONS AND COMMUNITY SERVICE

International Association for Society and Natural Resources (2007)

International Society for Ecological Economics (2007)

Advisory Committee for the Community-based Collaborative Research Consortium's book on Knowledge Synthesis of the Environmental Outcomes of Collaborative Management (2005)

Advisory Committee for the Diablo Trust IMfoS Project (since 2004)

Member, Community-based Collaborative Research Consortium (since 2001)

Co-President of the Environmental Science and Policy Graduate Student Organization (ESPGSO) (2002 – 2004)

Core group member for the Student Environmental Network, Prescott College (1998)

Community Coordinator for Alpha Zeta Fraternity, Michigan State University (1997)